
DEVELOPMENT OF ORIENTATION COURSE

IN SEXISM FOR URBAN MIDDLE/HIGHER

SECONDARY SCHOOL TEACHERS OF DELHI

(PART COMPLETED)

FINANCED BY: N.C.E.R.T.

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PREFACE

The present study, micro in nature and limited in its scope, is the first attempt to determine attitudes of middle/higher secondary teachers towards adult sex roles as well as teacher behaviour in school setting. Although a sizeable number of children in India drop out at the end of primary level, there are quite a few who continue till the end of class XII. Culturally, we are aware that restrictions on females increase subsequent to their attaining puberty. As a consequence, it is quite likely that discriminatory attitudes of teachers at this stage when the adolescents are undergoing both an identity as well as vocational crisis, might lead to ambiguity in respect of their self - image and role expectations in society.

It is the endeavour of the researchers to give precision and objectivity to observations by assessing teachers attitudes on a reliable attitude scale. If, truly speaking, schools prepare children to be socially well - adjusted as well as economically and emotionally independent, then it would be expected that the messages transmitted at school would conform to the prevailing social/cultural norms.

It is hoped that this innitial effort would inspire further investigation in both rural and non-metro towns of India.

This is of special import in India where the pace of sociological developments and value systems vary regionally as well as rural - urban wise.

REPORT ON "DEVELOPMENT OF ORIENTATION COURSE IN SEXISM FOR
URBAN MIDDLE/HIGHER SECONDARY SCHOOLS TEACHERS OF DELHI"


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their co-operation and assistance:

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Principals of 18 schools (list in Appendix) located in 4
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DR (MS) MADHURI R. SHAH

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DEVELOPMENT OF ORIENTATION COURSE IN SEXISM FOR
URBAN MIDDLE/HIGHER SECONDARY SCHOOL TEACHERS OF
DELHI

NEED FOR THE STUDY

Introduction

Despite the existing social legislation, there still exists a wide gap between law and observable social behaviour reflecting discriminatory attitudes towards the adult sex roles of men and women.

Even the most liberated individual of today is not free from a set of assumptions or misassumptions that not only differ from person to person but are also subjective.

Factually speaking, both boys and girls start life on a clean slate - it is only later that those responsible for their upbringing, influenced by their cultural milieu decide upon what roles are befitting for the sexes.

Highlighting biological differences between the two sexes, women have traditionally been labelled the "weaker sex" or "weak little pin heads". True enough, on account of strength being measured in terms of muscle mass, yes, men are ^{considered} stronger. But if on the other hand, while considering strength, cognisance is taken of longevity and stress tolerance, then women hold the aces.

The physical dependency of women upon men for protection has often been quoted as a reason for considering "Home to be the place" for women. Agreed,

that during pregnancy, women do need protection but observation reveals that male attitude towards this physiological condition is closely related to the economic class a woman belongs to. It is only among the affluent that the woman is 'a fragile flower'. Who can deny that in the less affluent groups, women continue with their normal chores till the last minute of delivery.

Despite the obvious biological differences between man and women can one confidently claim that these differences are relevant to the prevalent discriminatory adult roles. Could it not also be that these differences have been given symbolic significance leading women to feel inferior and/or ambivalent about themselves both in respect of physique and mind. As a consequence women have willingly accepted the 'second place' in life.

Again behaviour expectations have differed on grounds that the two sexes are dissimilar in their psychological make up. Undoubtedly certain differences are due to genetics nevertheless environmental conditioning continues to be an important factor in determining self-images. How else can one explain the fact that men in most societies consider themselves to be emotionless money-spinners?

The best documented difference in almost all cultures has been that of aggression - males being considered both verbally & physically more aggressive than females. Even if this be true, the question is whether in the future this trait is an asset calling for discriminatory roles?

Some of the other sex differences recorded are those in the sphere of abilities - women considered to be having better verbal ability while men better visual spatial ability.

Other than documented differences, several myths have been perpetuated in our culture e.g. girls are considered to be passive while boys active. True if being active means aggressive, yes, boys have an edge but if active is to be understood in terms of activity, curiosity, exploration, then no objective data is available to tilt the balance in favour of boys.

Unfortunately passivity among women has been a situation forced upon them over the years by the urbanised, industrialised society. Is it not a fact that in traditional societies, one still finds women tilling the fields, grinding wheat or pounding rice or for that matter women going on mountaineering expeditions and making scientific inventions.

Another myth surrounds the aspect of social ability-- underestimated among boys. The fact is, whether it be a boy or girl, the capacity for empathy contributing towards social relationships grows with age & has little to do with sex.

The most controversial myth surrounds the area of relationship of the adults of the two sexes to young children --whether women or men are more responsive to young babies. So far all societies have accepted women in the role of nurturers. However, whether this is a biological phenomena or whether it is on account of greater contact is a matter not yet settled.

Researches among animals, however, have revealed that carrying a child in the body for a period of time, per se does not necessarily mean that the bearer is nurturant towards it once it is outside the body--What effects nurturing behaviour as noted, is the opportunity of physical contact --females having more contact than males. In an experiment on male rats, it was revealed that after an initial aggressiveness, they showed what is considered "wired - in" female behaviour completely akin to maternal nurturing.

Regardless of the researches, one has no reason to expect or to hope that the two sexes will be just alike, psychologically speaking. Physiologically, of course the differences are obvious. What, however, seems to be of importance to realise is that some of the sex stereotypes created by society are really constraining to both sexes. It would not be too radical to assert that greater relaxation of ^{existing} rigid conceptualised adult roles would be helpful to both men & women. Specially true is this with regard to women in our society who for centuries have been conditioned to believe they are "less equal than men". Hope lies in societal attitudes towards them undergoing a change. Perhaps our Prime Minister/^{was}right when she said that "the greatest stumbling block to the women's full & equal development, is the mental attitude not only of men but of large numbers of women themselves because they are so conditioned by their families and the society around them".*1

*1 Prime Minister Ms. Gandhi's speech in Lok Sabha in April 1976.

Family and community, no doubt are important agents in this respect. However, today when a large portion of a young persons life is spent in the school -- "about 10000 hours by the time he/she graduates"*² the school experience plays a significant part in the attitude/character formation of a child.

Of great importance, therefore, is the need to assess the overt spoken messages and the covert behavioral interactions which are transacted between the teachers and the child. Both consciously and unconsciously, the teachers reflect their values, expectations and attitudes which lead to the development of the childs' self image vis a vis the future role in life.

Considering the importance of teacher attitudes in the determination of the future sex roles of the children, studies in the Indian context were conducted on primary school teachers*³. Among other things, these studies revealed that (a) As against females, male teachers at the primary level had greater preference for restrictive traditional role of women ^(patriarchy) and (b) Both male & female teachers at the primary level had different assumptions with regard to boy and girl pupils e.g. boys expected to be "naturally" naughty while girls "docile and fearsome".

*² Jacob C and Eaton C - American Magazine 1976

*³ Nischol K - Teacher Orientation Course on Sexism in the Classroom Delhi and

Nischol K - Influence of exposure to educational material and teacher attitude on school childrens' adult sex roles - Kerala

Culturally, in India, attitude towards growing girls, tends to become further restrictive. Centuries of conditioning have made girls believe that the most suitable adult role for them is that of a Housewife/mother. Considering that socio-economic developments in this country are requiring women to actualise their potentials and take to work outside home, it was felt desirable to determine whether at the adolescent stage too cultural biases are being reinforced in the schools or not. As a consequence the present study was undertaken to:

- (a) Ascertain teacher attitudes towards adult sex roles as well as in the class room situation at the middle/higher secondary school level and
- (b) Subsequently to expose a group of teachers to an orientation course designed to modify their sexist biases, if any.

While determining the teacher attitude, the focus of research was to determine whether statistically significant differences in attitudes exist among:

- (i) Male and female teachers at middle/secondary school level
- (ii) Teachers in government and non-government middle/higher secondary schools
- (iii) Teachers in co-educational and singlesex middle/higher secondary schools.

Sampling Design & Method

The total sample under study comprised of 300 teachers coming from urban middle/higher secondary schools in Delhi. The unit of sampling was schools and therefore the sample was split as follows:-

| | Co-ed Schools | Exclusive Boys Schools | Exclusive Girls schools | |
|-----------------------|------------------|---------------------------|----------------------------|------|
| Government/Aided | 50 | 50 | 50 | =150 |
| Non-government/Public | 50 | 50 | 50 | =150 |
| | 100 | 100 | 100 | =300 |

The universe of urban middle/higher secondary schools obtained was 908*⁴ in 4 educational zones of Delhi:-

| | Co-ed | | Exclusive Boys | | Exclusive Girls | |
|-----------------------------------|-------|-----------|----------------|-----------|-----------------|-----------|
| | Govt. | Non-Govt. | Govt. | Non-Govt. | Govt. | Non-Govt. |
| North Zone | | | | | | |
| - 236 schools (24.38 per cent) | 15 | 2 | 116 | 8 | 95 | - |
| East Zone | | | | | | |
| - 254 schools (26.24 per cent) | 12 | - | 120 | 1 | 118 | 3 |
| South Zone | | | | | | |
| - 249 schools (25.72 per cent) | 24 | 35 | 98 | - | 87 | 5 |
| West Zone | | | | | | |
| - 229 schools (23.66 per cent) | 20 | 21 | 91 | 1 | 95 | 1 |

Giving proportionate representation to each educational zone, a sample of 20 government & non-government (Co-educational, exclusive boys & Exclusive girls) was drawn at random from

*⁴ Directory of schools - Published by Delhi Bureau of Text Books - 1980.

each zone*⁵.

Several of the schools falling in the random sample failed to co-operate. In the final outcome, the sample of 300 teachers studied came from 18 schools - 9 government and 9 non-government (1.9 per cent of the total universe).

Zonal representation of the sample under study was:

North educational zone - 16.67 per cent
East educational zone - 38.89 per cent
South educational zone - 33.33 per cent
West educational zone - 11.11 per cent

METHODOLOGY

Subsequent to the selection of the sample, an attitude questionnaire was devised to provide the basis for determining teacher attitudes (Refer Appendix A-I). This questionnaire, divided into 2 sections comprised of 30 questions in Section I (dealing with teacher attitude towards adult sex roles) and 15 questions in Section II (dealing with teacher attitudes towards students in schools setting).

*⁵ Ref - Tippetts Table of random numbers - (As the universe was less than 1000, the total schools were numbered 0001 to 0968.

Section I of the questionnaire comprised of equal number of statements which would reflect teacher attitudes on triple roles of women namely women as worker, women as a person and woman as a housewife/mother*⁶.

Each statement on the questionnaire could be responded to on a five point scale ranging from +2 to -2. The numerical score of the statement was given a positive or negative score depending upon whether the response was non-biased or biased respectively. In case, the response reflected equal agreement & disagreement, the response was given no score (Refer Appendix A-II).

In as much as an individuals perceptions are influenced by experiences, values, home background and sex, the draft questionnaire was evaluated by three male and three female judges varying in age, experience, socio-economic background and occupation.

Modifying the draft questionnaire on the basis of the comments received, the said tool was tried out on a heterogeneous group of teachers to remove any ambiguities.

Subsequently the questionnaire (self administered) was given to groups of teachers in the various schools drawn in the sample. (Refer Appendix A II(a) for list of schools)

*⁶ Woman as a person - Statement - 1,4,7,10 ----- etc.

Woman as a worker - Statement - 2,5,8,11 ----- etc.

Woman as a housewife/mother Statement 3,6,9,12-----etc.

Prior to testing the hypothesis under study, it was felt necessary to determine the reliability of the tool used. On account of lack of time, the test-retest method could not be used. However the 'r' value was determined on the basis of the split-half method--dividing the test into odd - even statements (Refer Appendix for details of Test of Reliability - Tables III (a) & (b)).

The 'r' value obtained for Section I being .8 while for Section II/ being .7, the researchers felt that the tool constructed could be relied upon to give similar results regardless of the change in sampling or repetitive administration.

The Respondents

The total sample of 300 teachers under study came from schools distributed in the 4 Educational Zones of Delhi as follows:-

| | | |
|------------|---|-----|
| East Zone | = | 112 |
| West Zone | = | 27 |
| South Zone | = | 120 |
| North Zone | = | 27 |

(For detailed breakdown in terms of sex, religion, age education and type/nature of school refer Appendix A-IV)

Of interest to note was:

- (a) No representation of teachers came from:
- (1) Government schools in the West Zone
 - (2) Co-educational schools in North and East Zones.
 - (3) Exclusive girls schools in the West and South Zones.

(b) Representation of Muslim Teachers in the sample was negligible.

(c) Few teachers were under-graduates.

FINDINGS

Attitude of Teachers towards adult sex roles

The frequency distribution of scores among respondents (By sex) obtained in the schools regardless of whether employed in government, non-government, co-educational or single-sex schools was as follows:-

Table I

Males = 82
Females = 218
Total = 300

Frequency distribution of Scores (Section-I) By Sex (Attitude towards adult sex roles)

| Class | -28 | -23 | -18 | -13 | -8 | -3 | 2 | 7 | 12 | 17 | 22 | 27 | 32 | 37 | 42 | 47 | 52 | 57 |
|---------|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| inter- | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to |
| val | -24 | -19 | -14 | -9 | -4 | +1 | 6 | 11 | 16 | 21 | 26 | 31 | 36 | 41 | 46 | 51 | 56 | 61 |
| Males | 2 | 3 | 5 | 4 | 6 | 14 | 11 | 6 | 4 | 5 | 6 | 6 | 5 | 2 | 2 | - | 1 | - |
| Females | - | - | 2 | 2 | 4 | 8 | 19 | 14 | 24 | 27 | 18 | 29 | 23 | 16 | 18 | 8 | 5 | 1 |

At the outset it is noted that both among male & female teachers, the dispersion of scores is very wide indicating that there are teachers of both sexes who are inclined to be either too restrictive or too liberal in their concept of adult female role. However, as against 7.3. per cent female teachers there are 41.0 per cent male teachers who are on the whole negatively inclined towards liberalisation of female adult roles(Frequency distribution from -28 to +1). Furthermore reference Appendix A-V it is noted that the difference between the mean scores of male & female teachers is statistically significant. The hypothesis that there is no differences in the attitudes of male & female teachers towards adult sex roles is annuled.

The above mentioned result does not come as a surprise. For centuries, men in India, have been conditioned to believe that whereas "sky in the limit" for them, the life of women should be restricted to home tasks. The newly found emancipation of women, perhaps poses a threat to male superiority and unconsciously through their attitudes the teachers are reinforcing the traditional outlook.

Women teachers too do not reveal a total freedom from their existing limits on development. For one thing, they may be lacking the confidence in their capabilities. More likely, however, seems to be fear of "loss of femininity" and a sense of guilt when confronted with any situation that tends to clash with their traditional roles.

As regards, teacher attitudes towards students in the classroom, the results obtained were as under:

Table II

Males = 82
Females = 218
Total = 300

Frequency of distribution of scores - By Sex
(Behaviour in School) Section II

| Class interval | 0-14 | 14-10 | 10-6 | 6-2 | 2-0 | 0-6 | 6-10 | 10-14 | 14-18 | 18-22 | 22-26 | 26-30 & above | Total |
|----------------|---------|---------|--------|---------|--------|--------|---------|----------|----------|----------|----------|---------------|-------|
| | to 0-11 | to 11-7 | to 7-3 | to 3-+1 | to 1-5 | to 5-9 | to 9-13 | to 13-17 | to 17-21 | to 21-25 | to 25-29 | | |
| Males | - | 9 | 9 | 7 | 7 | 11 | 0 | 7 | 11 | 6 | 5 | 2 | = 82 |
| Females | 2 | 3 | 1 | 8 | 11 | 25 | 33 | 30 | 37 | 42 | 17 | 9 | =218 |

Considering that the dispersion of scores in the case of teachers of both sexes is near similar, it is

safe to opine that highly discriminatory as well as non discriminatory behaviour would be obtained amongst the teachers in the school situation. Herein too against 52.4 per cent male teachers, there are only 0.2 per cent female teachers reflecting negative outlook against students by gender. (Scores from -14 to +1)

The fact, however, that the means obtained in respect of male & female teachers is different -- higher in the case of female teachers (Refer Appendix A-VI), it is apparent that on the whole, female teachers appear to be less biased towards the sexes in the school situation. The difference between the means being statistically significant, one can confidently say that regardless of the present sample - teachers by sex would decidedly reveal a difference in their behaviour towards boy & girl student in the school setting.

With regard to the type of schools from which the sample was drawn, the frequency distribution of

scores given under, does not show a difference in the dispersion of scores. Evidently both in government and non-government schools, there would be teachers desiring a liberalisation of existing female roles as well as some who prefer the current constraints on female development.

Table III

Government schools = 150
Non-Government schools = 150
Total = 300

Frequency distribution of Scores - Section I
(Govt. & Non-govt. School)

(Attitude towards adult sex roles)

| | | | | | | | | | | | | | | | | | |
|--------|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Class | -28 | -23 | -18 | -13 | -8 | -3 | 2 | 7 | 12 | 17 | 22 | 27 | 32 | 37 | 42 | 47 | 52 |
| inter- | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to |
| val | -24 | -19 | -14 | -9 | -4 | +1 | 6 | 11 | 16 | 21 | 26 | 31 | 36 | 41 | 46 | 51 | 56 |

Teachers

in Govt. 2 2 3 4 9 13 21 13 20 18 12 12 9 7 4 - 1
Schools

Teachers

in Non- - - 4 2 3 5 9 11 7 13 12 23 20 10 16 9 5
govt.
schools

The point that could, however, be noted is that against 22.0 per cent teachers in government schools, there are 9.3. per cent teachers in non-government schools who reflect stronger bias in respect of pupil behaviour and expectations (Scores ranging from -28 to +1).

Reference to Appendix A-VII, however, it is observed that the mean score obtained by teachers in non-government schools is not only higher than that obtained by teachers in government schools but the difference between the two mean scores is statistically significant at 5% level.

The results indicate that the hypothesis namely there is no difference in the attitudes of teachers in government schools and non-government schools with regard to adult sex roles does not hold good.

With regard to the attitude of teachers towards students in the school setting (Reference Appendix A-VIII) it is noted that the mean scores on the attitude scale (Section II) differs significantly. What is apparent is that teachers (regardless of sex) in non-govt. schools tend to be less biased compared to teachers in government schools. The difference in mean scores being statistically significant at 5% level, the results cannot be attributed to chance.

In order to determine whether the presence of students of both sexes in a school tend to influence the attitudes of teachers, the researchers classified the teachers according to their employment in co-educational & singlesex schools.

The results obtained were:-

Table IV. Teachers in co-ed schools = 100
Teachers in singlesex schools = 200
Total = 300

Frequency distribution of Scores -By co-education
& non-coeducational schools - Section I
(Attitude towards adult sex roles)

| | | | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Class | -28 | -23 | -18 | -13 | -8 | -3 | 2 | 7 | 12 | 17 | 22 | 27 | 32 | 37 | 42 | 47 | 52 | 57 |
| inter- | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to | to |
| val | -24 | -19 | -14 | -9 | -9 | +1 | 6 | 11 | 16 | 21 | 26 | 31 | 36 | 41 | 46 | 51 | 56 | 61 |
| Teachers | | | | | | | | | | | | | | | | | | |
| in Co-ed | - | - | - | 3 | 5 | 5 | 9 | 11 | 13 | 11 | 3 | 8 | 9 | 8 | 9 | 2 | 4 | 0 |
| Schools | | | | | | | | | | | | | | | | | | |
| Teachers | | | | | | | | | | | | | | | | | | |
| in single | | | | | | | | | | | | | | | | | | |
| sex | 2 | 2 | 7 | 3 | 7 | 13 | 21 | 13 | 14 | 20 | 21 | 27 | 19 | 11 | 11 | 6 | 2 | 1 |
| schools | | | | | | | | | | | | | | | | | | |

It is obvious from the above that the scores

obtained in both cases are widely dispersed in both cases-- the one difference being that teachers in singlesex schools revealing stronger biases in more numbers (13 per cent negative scores among teachers in coeducational schools as against 17 per cent in /^{single}sex schools (scores ranging from -28 to +1).

Reference Appendix A-IX, however, it is observed that the mean scores obtained by the different sets of teachers are not the same. A Application of the test of significance indicates that the difference is not statistically significant and could be due to fluctuation of sampling.

Observation of results in respect of teachers attitude towards students in school setting (Reference Appendix A-X), it is noted that teachers, regardless of whether they are teaching in co-education or /^{single}sex schools do not reveal attitude differences towards students which are statistically significant.

Although, the present study was primarily concerned in determining whether attitude differences among urban middle/higher secondary school teachers existed by sex, by nature & type of schools, yet the researchers being aware that attitudes are the resultant of a complex set of factors like religion, socio-economic background, ideologies and an individuals own upbringing in childhood, a further analysis was done in respect of teacher differences in attitudes by religion*⁷ and age.

*⁷ The population of Muslim teachers being only 4 the differences in mean scores were tested only for Hindu (including Sikh) & Christian teachers.

The sample under study comprised predominately of Hindu teachers with a sprinkling of Muslim teachers and a slighter larger number of Christian teachers mainly in Non-government schools. Whereas teachers in Government schools possibly were reflecting their personal ideologies, the chances were great that the attitudes of the Christian teachers employed in schools either headed by Christians or run by Christian group, were revealing both their own as well as some part of the ideology upheld by the school authorities.

The frequency distribution of scores on Section I (attitude towards adult sex roles) and Section II (attitude in school setting) were as follows:-

Table V (a)

Hindus = 255
Christians = 42
Total = 296*⁸

Frequency distribution of Scores - By religion

Section I

(Attitude towards adult sex roles)

| Class intervals | Hindu | Christians |
|-----------------|-------|------------|
| -28 - -24 | 2 | 0 |
| -23 - -19 | 2 | 0 |
| -18 - -14 | 6 | 0 |
| -13 - -9 | 5 | 1 |
| -8 - -4 | 11 | 0 |
| -3 - +1 | 20 | 1 |
| 2 - 6 | 28 | 2 |
| 7 - 11 | 18 | 2 |
| 12 - 16 | 26 | 3 |
| 17 - 21 | 25 | 6 |
| 22 - 26 | 21 | 3 |
| 27 - 31 | 25 | 11 |
| 32 - 36 | 25 | 3 |
| 37 - 41 | 14 | 3 |
| 42 - 46 | 16 | 4 |
| 47 - 51 | 6 | 2 |
| 52 - 56 | 6 | 0 |
| 57 - 61 | - | 1 |
| Total | 255 | 42 |

*8 4 Muslim teachers deleted in analysis.

Table V (b)

Hindus = 255
Christians = 42
Total = 296*⁹

Frequency distribution of Scores - By religion

Section II

(Teacher attitude in school)

| Class intervals | Hindus | Christians |
|-----------------|--------|------------|
| -14 - -11 | 2 | 0 |
| -10 - -7 | 12 | 0 |
| -6 - -3 | 10 | 1 |
| -2 - +1 | 15 | 0 |
| 2 - 5 | 17 | 0 |
| 6 - 9 | 32 | 3 |
| 10 - 13 | 34 | 8 |
| 14 - 17 | 30 | 8 |
| 18 - 21 | 39 | 5 |
| 22 - 25 | 38 | 11 |
| 26 - 29 | 15 | 4 |
| 30 & above | 10 | 2 |
| Total | 255 | 42 |

Noted from the above is:

- (a) that against 18.0 per cent Hindu teachers, there are 4.8 Christian teachers whose attitudes are on the whole biased against liberalisation of females roles (Scores -28 to +1)
- (b) that against 15.3 per cent Hindu teachers there are 2.4 per cent teachers reflecting biases against students in the school setting (Scores -14 to +1)

*⁹ 4 Muslim teachers deleted in analysis.

Reference Appendix A-XI, one notes that in respect of teacher attitudes towards adult sex roles:

- (a) The mean score of Christian teachers is higher than that of Hindu teachers - evidently the former are more inclined towards actualisation of females.
- (b) There is a wider variation in the attitudes of Hindu teachers in comparison to attitude among Christian teachers - evidently amongst Hindus there are some who whole heartedly agree with liberalisation of female roles whilst others uphold traditional roles.
- (c) The difference in mean scores of Christian and Hindu teachers is statistically significant at 5% level -- revealing that followers of Christianity (regardless of sample changes) tend to uphold the view of greater equality amongst the sexes.

With regard to attitude of Christian & Hindu teachers towards students in the school situation (Appendix A-XII) results obtained are similar to that in respect of general attitude towards adult sex roles. Herein too, Christian teachers reveal less biases against females and their attitudes are significantly different from those of Hindu teachers.

Observation indicates that traditionalism has greater acceptance by those belonging to higher age groups. To lend objectivity to the observation, the researchers analysed the scores on the attitude scale after categorising the sample into three age-groups namely 22 years to 33 years; 34 years to 44 years and 45 years and above (herein after referred to as categories (a), (b) and (c) respectively.

The frequency distribution of scores on Section I i.e. attitudes towards adult sex roles and Section II i.e. teacher behaviour in school situation are given below:

Table VI

Age Group (a) = 111
(b) = 120
(c) = 69

Frequency distribution of Scores

By age

Total 300

Section - I

(Attitude towards adult sex roles)

| Class intervals | Age Group A | Age Group B | Age Group C |
|-----------------|-------------|-------------|-------------|
| -28 to -24 | 1 | 1 | - |
| -23 to -19 | - | 1 | 1 |
| -18 to -14 | 2 | 3 | 1 |
| -13 to -9 | 2 | 3 | 2 |
| -8 to -4 | 2 | 5 | 3 |
| -3 to +1 | 6 | 7 | 8 |
| 2 to 6 | 12 | 11 | 9 |
| 7 to 11 | 9 | 7 | 5 |
| 12 to 16 | 7 | 13 | 8 |
| 17 to 21 | 7 | 18 | 6 |
| 22 to 26 | 10 | 10 | 3 |
| 27 to 31 | 15 | 13 | 8 |
| 32 to 36 | 10 | 12 | 5 |
| 37 to 41 | 9 | 8 | 2 |
| 42 to 46 | 12 | 5 | 3 |
| 47 to 51 | 4 | 2 | 2 |
| 52 to 56 | 2 | 1 | 3 |
| 57 to 61 | 1 | - | - |
| Total | 111 | 120 | 69 |

Table VII

Age Group (a)=111

(b)=120

(c)= 69

Frequency distribution of Scores

By age

Total 300

Section - II

(Teacher behaviour in school situation)

| Class intervals | Age Group(a) | Age Group (b) | Age Group (c) |
|-----------------|--------------|---------------|---------------|
| -14 to -11 | 1 | - | 1 |
| -10 to -7 | 3 | 6 | 3 |
| -6 to -3 | 2 | 4 | 3 |
| -2 to +1 | 4 | 8 | 3 |
| 2 to 5 | 6 | 7 | 5 |
| 6 to 9 | 13 | 15 | 8 |
| 10 to 13 | 10 | 17 | 15 |
| 14 to 17 | 13 | 18 | 7 |
| 18 to 21 | 19 | 21 | 8 |
| 22 to 25 | 19 | 18 | 11 |
| 26 to 29 | 14 | 5 | 2 |
| 30 & above | 7 | 1 | 3 |
| Total | 111 | 120 | 69 |

Noted from above is that although the attitude scores are widely distributed in the case of all age groups yet against 11.7 per cent in age group (a), there are 16.7 per cent and 21.7 per cent in age groups (b) & (c) who are on the whole negatively inclined towards relaxation of constraints on adult female roles (frequency scores from -28 to +1).

Based on similar observation, it is observed that in the school setting against 9.0 per cent in age group (a), there are 15.0 per cent & 14.5 per cent in age groups (b) & (c) respectively who are on the whole negatively biased against students by sex.

Application of test of significance to the mean scores obtained in each age group with regard to adult sex roles (Appendix A-XIII) (a), (b) & (c) it is noted that:-

- (1) The difference in the mean scores obtained by age group (a) & (b) is statistically significant. Considering that the mean score of age group (a) is higher than that of (b), one can confidently expect teachers of younger age - group (a) to be less biased towards female roles.
- (2) Although there is a difference in the mean scores of teachers in age groups (b) & (c) (it being higher in the former case) yet the difference not being statistically significant one could opine that the difference in attitudes of teachers in these two groups could be due to chance.
- (3) The attitudes of teachers in age groups (a) are significantly different from those in age group (c) -- those in the latter groups revealing greater adherence to traditional female roles.

Considering the results obtained on Section II (teacher behaviour in school) to be the same (refer Appendix A-XIV (a), (b) & (c)) it would be safe to opine that teachers below the age of 33 years would decidedly not only be in favour of female equality in all spheres of life but would also be less biased in their attitudes towards students in the school setting.

The role of the Indian urban female today seen in the context of its functional significance for the social system is generally more than one--she is a wife, mother and homemaker, she often undertakes useful economic work for the financial benefit of the family and, as an individual attempts to actualise her dormant potential. Nonetheless, what a women does in each of these segments of her life, hang together and operate as a coherent role.

Recognising the impact of centuries of social conditioning, supported by religious scriptures upon the prevailing attitudes towards different segments of the female role, the data obtained was further analysed (by sex) according to the responses received on each segment (Refer page 4 of the report for various statements eliciting attitudes on different segments)

Table VIII

Frequency distribution of
scores on triple roles of
Female (By sex)

Males = 82

Females = 218

Total = 300

(Women as a person, as worker and as mother/housewife)

| Class interval | F _P * | | F _{HW} * | | F _W * | |
|----------------|------------------|-----|-------------------|-----|------------------|-----|
| | M | F | M | F | M | F |
| -26 to -21 | - | - | - | - | - | - |
| -20 to -15 | - | - | - | - | - | - |
| -14 to -9 | 4 | 2 | 10 | 9 | 3 | - |
| -8 to -3 | 5 | 4 | 30 | 32 | 10 | 5 |
| -2 to +3 | 19 | 15 | 18 | 81 | 37 | 48 |
| 4 to 9 | 20 | 43 | 15 | 61 | 28 | 93 |
| 10 to 15 | 18 | 56 | 8 | 31 | 3 | 61 |
| 16 to 21 | 12 | 65 | 1 | 4 | 1 | 11 |
| 22 to 27 | 4 | 33 | - | - | - | - |
| Total | 82 | 218 | 82 | 218 | 82 | 218 |

*10 F_P = Female as a person

F_{HW} = Female as housewife/mother

F_W = Female as worker.

Means and Standard Deviation (by sex)

Women as person

$$\bar{X}_F = 13.54 \quad \sigma_F = 7.74$$

$$\bar{X}_M = 7.00 \quad \sigma_M = 8.76$$

Women as Housewife/mother

$$\bar{X}_F = 2.84 \quad \sigma_F = 6.54$$

$$\bar{X}_M = -.67 \quad \sigma_M = 7.32$$

Women as worker

$$\bar{X}_F = 7.19 \quad \sigma_F = 5.28$$

$$\bar{X}_M = 2.04 \quad \sigma_M = 5.34$$

Reference to the above table it is noted that:

- (a) As the average (means score) obtained by female respondents on each of the segmented roles is higher than that of the males, it is obvious that comparatively speaking males are more inclined towards the perpetuation of existing restrictions on female development. The strongest reaction is revealed against liberalisation of the role of the female as a mother/housewife followed by her role as worker (Refer statements recorded in Appendix A marked Male Biases for details of aspects on which male biases are strong).
- (b) Taking account of the negative through ambivalent to minor agreement responses (-24 to +3) it is noted that opinion of male to female respondents is 34.1 per cent to 9.6 per cent in respect of liberalisation of personal development of females; 70.73 males as against 55.96 females in respect of female role as mother/housewife and 60.97 males as against 24.31 females with regard to female role of worker.

Evidently it is not only that males attitude is in favour of perpetuation of existing constraints but it is the attitudes of females too which act as a barrier towards their release from limitations on their role of mother, housewife and worker. To put it bluntly women are their own enemies. Whereas on one hand they desire personal development, they are hesitant to be shorn of total responsibility in the home as well as becoming competitors to men in the field of gainful employment outside home. One wonders what development can be expected of a developing nation whose half the population (female) is disinclined to be equal partners of men in all areas of life. Especially disconcerting is this phenomena, in view of the fact that today there are far more females than male teachers in schools -- as such the messages which the female students will be receiving even from their own sex would be having stronger effect in acting as barriers in their future development as equals.

Reference to tables XV (a), (b) & (c) in the Appendix A, it is noted that difference in mean scores of male & female teachers are statistically significant in respect of all the segmented roles of adult females. This being the case, the chances are that the adolescent group (especially that of girls) being taught by the middle/higher secondary school teachers in Delhi would be put in a double bind. They would, in several areas be ~~recepoints~~ of conflicting messages from teachers. Even students studying in singlesex schools would be faced with the situation of receiving guidance from teachers varying widely in their opinions with regard to adult sex roles.

Conclusion

The present study although micro in nature and conducted only in Delhi Metro, reveals definite ambiguity in the minds of educators responsible for providing guidance to the growing generation.

At the middle/higher secondary stage where most children are searching for their identity and their future goals in life, it is apparently a very disconcerting situation that the adults involved in their guidance are themselves unsure of what they wish their students 'to be' or 'to achieve'.

The point to note is that although male and female teachers differ significantly in their attitudes towards the two sexes (males being more traditional than females in their outlook) yet the female teachers too who are role models to their own sex, appear to transmit confusing messages. Whereas on one hand they desire the girl students to develop their personalities to the maximum, yet on the other hand they expect the girls to continue to be "traditional" housewife/mothers as well as workers in limited areas only. Is it that they themselves feel guilty for having crossed the threshold of the home

and look upon work only as a supplement to family income rather than career? Or is there a feeling of guilt among them that they are responsible for the increasing anti-social habits among their own children on account of being physically away from home or is it that they are afraid of losing their hold in the home where for centuries they have held the strings?

On the part of men, it is apparent that they appear to be unconcerned about being nurturants and look upon female dent into the work force as a threat to their security.

The researchers feel that similar studies need to be conducted in several more urban and rural towns of India so that one could be in a more authentic position with regard to opinion of educators towards the adult sex roles.

Stemming from these results the orientation course for urban middle/higher secondary teachers is being planned.

ATTITUDINAL QUESTIONNAIRE

The following questionnaire (Section I reflects your general attitudes towards adult sex roles while Section II reflects your attitudes toward the school situation) attempts to investigate teacher attitudes. There are no "right" or "wrong" answers. You are asked to react to each statement spontaneously, indicating degree of support or non-support. Certain statements are the result of observational facts and studies. However, you are required to indicate your agreement/disagreement independent of conclusion.

- A. Strongly Agree -
- B. Mildly Agree -
- C. Equally Agree and Disagree -
- D. Mildly Disagree -
- E. Strongly Disagree -

It is important that you respond as you really view the situation. Try not to qualify and make exceptions to the statements, but rather react quickly to them. Make only one choice per statement, using the appropriate alphabetical symbol A,B,C,D & E. Do not leave any blanks.

NAME

AGE

SEX

RELEGION

QUALIFICATION(EDUCATIONAL)

YEARS OF SERVICE (TOTAL)

SCHOOL

DATE

SECTION I

ATTITUDE TOWARDS ADULT SEX ROLES

Agree/Disagree
Responses

- | | |
|--|--|
| 1. Both men and women should express their emotions freely without fear of losing their sexual identity e.g. a man when crying need not be considered 'sissy' nor a woman when laughing heartily a 'tomboy'. | |
| 2. A successful marriage requires greater adjustment on the part of the women than man. | |
| 3. Women do not lose their femininity when they perform jobs usually executed by men. | |
| 4. Women should limit their friendships to other women only. | |
| 5. Men should not sacrifice their professional ambitions in favour of domestic obligation, while women should. | |
| 6. Career should take precedence over every thing else in the life of women regardless of their marital status. | |
| 7. Role segregation e.g. men to be breadwinners and women to be homemakers, is important for stable family life. | |
| 8. Many emotional adjustment problems of children are primarily due to mothers working outside home. | |

Agree/Disagree
Responses

9. Social institutions, such as schools, colleges, destitute homes, Social Welfare Organisations, would benefit more if headed by women at the policy-making and administrative level.
10. As a rule girls are less intelligent than boys.
11. Possibility of marital disharmony is greater where wives are successful career women.
12. Women handle routine, repetitive tasks better than creative and innovative ones.
13. Higher education is an embellishment in the professional prospects of women.
14. Married career women should normally attach greater importance to the career of their husbands than to their own achievement.
15. Jobs for women should be limited to those which are an extension of home tasks such as teaching, nursing etc.
16. If there is a difference of opinion between husband and wife the opinion of husband should finally prevail.
17. Even when both spouses work, it should still be the duty of women to attend to household tasks and care of children.

Agree/Disagree
Responses

18. Today, woman can compete in all areas of work without being considered masculine.
19. It is more becoming of women to be modest and submissive, allowing men to lead them.
20. After marriage, men should take decisions on important financial matters leaving the decisions on home tasks and children to women.
21. As in the case of men, womens choice of career should be determined by their interests and aptitudes rather than by the demands of tradition.
22. Self-development is just as important for women as it is for men.
23. Stimulating, interesting women who are independent and can stand on their feet make better wives than those who function as male appendages.
24. Women today can successfully make a dent in areas of work, traditionally considered male domains.
25. More than companionship, it is the physical appearance of women which is of greater importance to men.
26. Marriage, not career, is the ultimate goal of women.

Agree/Disagree
Responses

9. Social institutions, such as schools, colleges, destitute homes, Social Welfare Organisations, would benefit more if headed by women at the policy-making and administrative level.
10. As a rule girls are less intelligent than boys.
11. Possibility of marital disharmony is greater where wives are successful career women.
12. Women handle routine, repetitive tasks better than creative and innovative ones.
13. Higher education is an embellishment in the professional prospects of women.
14. Married career women should normally attach greater importance to the career of their husbands than to their own achievement.
15. Jobs for women should be limited to those which are an extension of home tasks such as teaching, nursing etc.
16. If there is a difference of opinion between husband and wife the opinion of husband should finally prevail.
17. Even when both spouses work, it should still be the duty of women to attend to household tasks and care of children.

Agree/Disagree
Responses

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19. It is more becoming of women to be modest and submissive, allowing men to lead them.
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24. Women today can successfully make a dent in areas of work, traditionally considered male domains.
25. More than companionship, it is the physical appearance of women which is of greater importance to men.
26. Marriage, not career, is the ultimate goal of women.

Agree/Disagree
Responses

27. Qualified women when in positions of authority over men need not generate resentment among men.

28. Women have the right to decide in such matters:

(a) their marital status (marriage, divorce, singlehood)

(b) Mode of dress

(c) Choice of friends

(d) Social activities.

29. Married life does not suffer if women take to career seriously.

30. Dual responsibilities of home and work cripple women emotionally and mentally.

SECTION II

ATTITUDE TOWARDS STUDENTS IN SCHOOL SETTING

Agree/Disagree
Responses

- | | |
|----|--|
| 1. | Boy and girl students should be seated in class seperately. |
| 2. | Boys and girls should not be asked to do similar tasks e.g. boys should help in doing tasks of manual strength (gardening, fretwork etc.) while girls should help in cooking school meals. |
| 3. | When boys and girls are equally involved in a particular disciplinary problem, girls should be less severely disciplined. |
| 4. | Work experience opted by boys and girls should be commensurate with their individual interests rather than with tradition. |
| 5. | Girls should not participate in organised competitive games like football, hockey, cricket. |
| 6. | Boys can be noisy and aggressive; not girls. |
| 7. | Teachers should intervene when boys and girls tend to discriminate against each other in games and other school activities. |
| 8. | Boys should be singled out for criticism if they cry when hurt and girls when they laugh heartily. |
| 9. | Joint play of boys & girls during recess should be discouraged. |

Teachers should avoid use of language that arbitrarily and discriminatorily assigns traits to either sex e.g. girls are easily prone to tears or boys lose nothing if they are pronuscious.

11. It is reasonable to expect boys to do better in mathematics and girls in languages.

12. Teachers should not pressurise girls to work hard as high academic achievement is not as important for them as for boys.

15. If in text content there is reference to male achievers in one particular field teachers should make a point of referring to success of women in similar (if appropriate) or different fields.

14. Boys and girls should be severely reprimanded if seen to be friendly with each other.

15. Class leadership or responsibilities should only be assigned to boys.

ATTITUDE QUESTIONNAIRE

Appendix A - II

SCORING SHEET

| Statement No. | A | B | C | D | E | Statement No. | A | B | C | D | E |
|---------------|----|----|---|----|----|---------------|----|----|---|----|----|
| 1 | +2 | +1 | 0 | -1 | -2 | 1 | -2 | -1 | 0 | +1 | +2 |
| 2 | -2 | -1 | 0 | +1 | +2 | 2 | -2 | -1 | 0 | +1 | +2 |
| 3 | +2 | +1 | 0 | -1 | -2 | 3 | -2 | -1 | 0 | +1 | +2 |
| 4 | -2 | -1 | 0 | +1 | +2 | 4 | +2 | +1 | 0 | -1 | -2 |
| 5 | -2 | -1 | 0 | +1 | +2 | 5 | -2 | -1 | 0 | +1 | +2 |
| 6 | +2 | +1 | 0 | -1 | -2 | 6 | -2 | -1 | 0 | +1 | +2 |
| 7 | -2 | -1 | 0 | +1 | +2 | 7 | +2 | +1 | 0 | -1 | -2 |
| 8 | -2 | -1 | 0 | +1 | +2 | 8 | -2 | -1 | 0 | +1 | +2 |
| 9 | +2 | +1 | 0 | -1 | -2 | 9 | -2 | -1 | 0 | +1 | +2 |
| 10 | -2 | -1 | 0 | +1 | +2 | 10 | +2 | +1 | 0 | -1 | -2 |
| 11 | -2 | -1 | 0 | +1 | +2 | 11 | -2 | -1 | 0 | +1 | +2 |
| 12 | -2 | -1 | 0 | +1 | +2 | 12 | -2 | -1 | 0 | +1 | +2 |
| 13 | -2 | -1 | 0 | +1 | +2 | 13 | +2 | +1 | 0 | -1 | -2 |
| 14 | -2 | -1 | 0 | +1 | +2 | 14 | -2 | -1 | 0 | +1 | +2 |
| 15 | -2 | -1 | 0 | +1 | +2 | 15 | -2 | -1 | 0 | +1 | +2 |
| 16 | -2 | -1 | 0 | +1 | +2 | | | | | | |
| 17 | -2 | -1 | 0 | +1 | +2 | | | | | | |
| 18 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 19 | -2 | -1 | 0 | +1 | +2 | | | | | | |
| 20 | -2 | -1 | 0 | +1 | +2 | | | | | | |
| 21 | -2 | -1 | 0 | -1 | -2 | | | | | | |
| 22 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 23 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 24 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 25 | -2 | -1 | 0 | +1 | +2 | | | | | | |
| 26 | -2 | -1 | 0 | +1 | +2 | | | | | | |
| 27 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 28 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 29 | +2 | +1 | 0 | -1 | -2 | | | | | | |
| 30 | -2 | -1 | 0 | +1 | +2 | | | | | | |

Max score of:
Non biased= +66
Biased= -66

Max score of:
Non biased = +30
Biased = -30

LIST OF SCHOOLS - DELHI

Sardar Patel Vidyalaya - Lodi Estate (South Zone)

St. Thomas School - Handir Marg (East Zone)

St. Columbus - Baba Kharak Singh Marg (East Zone)

Convent of Jesus & Mary - Bangla Sahib Marg (East Zone)

Boys Higher Secondary School - Lajpat Nagar (South Zone)

Co-educational Govt. Higher Secondary School -
R.K. Puram, Sector II (South Zone)

Presentation Convent - Kashmore Gate (North Zone)

Central School - R.K. Puram Sector II (South Zone)

St. Xavier School - Raj Nivas Marg (North Zone)

Government Girls Higher Secondary School - Vivek Vihar -
(East Zone)

Government Boys Higher Secondary School - Vivek Vihar
(East Zone)

Government Girls Higher Secondary School - Arambagh Lane
(East Zone)

Government Girls Higher Secondary School - Jama Masjid
(East Zone)

United Christian School - Raj Nivas Marg (North Zone)

Mount St. Mary - Cantonment (West Zone)

Government Co-educational Higher Secondary School -
Chitranjan Park (South Zone)

Army Public School - Dhola Kuan (South Zone)

Springdales School - Pusa Road (West Zone)

RELIABILITY OF ATTITUDE QUESTIONNAIRE

ATTITUDE ON ADULT SEX ROLES SECTION I

X(f_o)

| y(f _e) | -15 to -11 | -10 to -6 | -5 to -1 | 0 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | | | | | | | | | | |
|--------------------|------------|-----------|----------|--------|--------|----------|----------|----------|----------|-------|-------|------------------|-------|--|--|--|--|--|--|
| Class interval | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | f | fdx | fdx ² | fdxdy | | | | | | |
| -15 to -11 | 2 | 32 | 1 | 12 | 3 | 24 | - | 1 | -8 | 7 | -28 | 112 | 60 | | | | | | |
| -10 to -6 | - | 3 | 27 | 6 | 36 | 5 | 9 | 2 | 7 | 14 | -42 | 126 | 72 | | | | | | |
| -5 to -1 | - | 3 | 18 | 8 | 32 | 9 | 18 | 4 | 7 | 24 | -48 | 96 | 68 | | | | | | |
| 0 to 4 | - | 2 | 6 | 11 | 22 | 22 | 19 | 7 | 5 | 61 | -61 | 61 | 41 | | | | | | |
| 5 to 9 | - | 7 | 7 | 3 | 7 | 5 | 7 | 15 | 7 | 41 | 0 | 0 | 0 | | | | | | |
| 10 to 14 | - | - | - | 11 | -11 | 14 | 7 | 8 | 8 | 53 | 53 | 53 | 38 | | | | | | |
| 15 to 19 | - | - | 1 | -4 | 1 | -2 | 11 | 7 | 14 | 58 | 116 | 232 | 192 | | | | | | |
| 20 to 24 | - | - | 1 | -3 | 1 | -3 | 6 | 7 | 5 | 34 | 102 | 306 | 177 | | | | | | |
| 25 to 29 | - | - | - | - | - | 7 | 1 | 8 | 3 | 8 | 32 | 128 | 108 | | | | | | |
| | | | | | | | | | | N=300 | =+124 | =1114 | =756 | | | | | | |

| | | | | | | | | | |
|------------------|----|-----|-----|-----|----|----|-----|-----|-----|
| Frequency | 2 | 9 | 33 | 52 | 71 | 40 | 56 | 26 | 11 |
| Fdy | -8 | -27 | -66 | -52 | 0 | 40 | 112 | 78 | 44 |
| Fdy ² | 32 | 81 | 132 | 52 | 0 | 40 | 224 | 234 | 176 |
| Fdxdy | 32 | 63 | 104 | 33 | 0 | 38 | 168 | 186 | 132 |

$$r = \frac{756 - 50.013}{1062.767} = \frac{705.987}{1062.767} = .713$$

Co effecient of reliability = $\frac{2r}{1+r}$ i.e. $\frac{2 \times .713}{1 + .713} = .832$

X (fe)

RELIABILITY OF ATTITUDE QUESTIONNAIRE
ATTITUDE IN SCHOOL SETTING SECTION II

Appendix A-III(b)

| X(f _o) | -11 to -7 | -6 to 0 | -1 to 4 | 8 to 9 | 13 to 14 | 18 to 19 |
|--------------------|-----------|---------|---------|--------|----------|----------|
| Class interval | -2 | -1 | 0 | +1 | +2 | +3 |
| -11 to -7 | -2 | 0 | 0 | 1 | -4 | 0 |
| -6 to -2 | -1 | 1/2 | 4 | 4 | 3 | 0 |
| -1 to +3 | 0 | 5 | 0 | 18 | 0 | 17 |
| 4 to 8 | 1 | 1 | -2 | 8 | 0 | 2 |
| 9 to 13 | 2 | 0 | 0 | 11 | 0 | 20 |
| 14 to 18 | 3 | 0 | 0 | 11 | 0 | 20 |
| Frequency | 7 | 30 | 60 | 67 | 104 | 32 |
| Fdx | -14 | -30 | 0 | 67 | 208 | 96 |
| Fdx ² | 28 | 30 | 0 | 67 | 416 | 288 |
| Fdx ² | 0 | -4 | 0 | 69 | 328 | 201 |
| N | 300 | 353 | 711 | 594 | 594 | 594 |

$$r = \frac{594 - \frac{353 \times 327}{300}}{300}$$

$$829 - \frac{(327)^2}{300} = 711 - \frac{(353)^2}{300}$$

$$= \frac{594 - 384.77}{829 - 356.43} = \frac{711 - 415.36}{209.23}$$

$$= \frac{472.57}{295.64}$$

$$= \frac{209.23}{20.68 \times 17.2} = \frac{209.23}{355.7} \quad r = .588$$

$$\therefore \text{Co efficiency of reliability} = \frac{2r}{1+r} = \frac{.588 \times 2}{1+.588} = .74$$

BREAKDOWN OF THE RESPONDENTS

| SAMPLE ONES = | 112 | | 27 | | 120 | | 27 | | Total |
|---------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| | EAST | | WEST | | SOUTH | | NORTH | | |
| | Males | Females | Males | Females | Males | Females | Males | Females | |
| Govt. schools | 14 | 50 | - | - | 30 | 49 | 5 | 2 | 150 |
| Non Govt. schools | 7 | 41 | 9 | 18 | 10 | 31 | 7 | 27 | 150 |
| Pre-educational | - | - | 4 | 5 | 14 | 77 | - | - | 100 |
| Exclusive boys | 20 | 10 | 5 | 13 | 26 | 3 | 12 | 11 | 100 |
| Exclusive girls | 1 | 81 | - | - | - | - | - | 18 | 100 |
| Hindus | 17 | 75 | 7 | 15 | 38 | 76 | 8 | 18 | 254 |
| Muslim | - | 1 | - | - | 2 | - | - | 1 | 4 |
| Christian | 4 | 15 | 2 | 3 | - | 4 | 4 | 10 | 42 |
| Age group - 33 yrs. | 4 | 42 | 4 | 7 | 16 | 24 | 5 | 9 | 111 |
| Age group - 44 yrs. | 9 | 33 | 4 | 4 | 14 | 39 | 5 | 12 | 120 |
| Age group 5 & above | 8 | 16 | 1 | 7 | 10 | 17 | 2 | 8 | 69 |
| Graduate | 11 | 37 | 2 | 7 | 16 | 33 | 3 | 9 | 118 |
| Postgraduate | 10 | 52 | 7 | 10 | 23 | 45 | 9 | 20 | 176 |
| Undergraduate | - | 2 | - | 1 | 1 | 2 | - | - | 6 |

Appendix A-V

Testing the means for significance (Female Teachers = 21

vs

SECTION I

Male Teachers = 31
Total = 52

(Attitude towards adult sex roles)

| C I | F _f | F _m | |
|-----------|----------------|----------------|--|
| -23 - -24 | - | 2 | X _f = 24.48 |
| -23 - -19 | - | 3 | X _m = 8.73 |
| -18 - -14 | 2 | 5 | S-F = 15.31 |
| -13 - -9 | 2 | 4 | S-M = 17.83 |
| -8 - -4 | 4 | 6 | Standard Error |
| -3 - +1 | 8 | 14 | S.E. = $\sqrt{\frac{F^2}{n_1} + \frac{S^2 M^2}{n_2}}$ |
| 2 - 6 | 9 | 11 | |
| 7 - 11 | 14 | 6 | Whereby |
| 12 - 16 | 24 | 4 | |
| 17 - 21 | 27 | 5 | n ₁ = no. of females |
| 22 - 26 | 18 | 6 | n ₂ = no. of males |
| 27 - 31 | 29 | 6 | $= \frac{15.31^2}{218} + \frac{(17.83)^2}{82}$ $= 1.08 + 3.88$ $= 4.96$ $= 2.23$ |
| 32 - 36 | 23 | 5 | |
| 37 - 41 | 16 | 2 | |
| 42 - 46 | 18 | 2 | |
| 47 - 51 | 8 | - | |
| 52 - 56 | 5 | 1 | |
| 57 - 61 | 1 | - | |
| | 218 | 82 | |

$$X_f - X_m$$

$$= 24.48 - 8.75 = 15.75$$

$$\frac{\text{Difference}}{\text{S.E.}} = \frac{15.75}{2.25}$$

$$= 7.06$$

Since the difference between means greater than 1.96 S.E. at 5% level of significance it cannot be attributable to chance.

C I = Class Interval

F_f = Frequency obtained among female teachers

F_m = Frequency obtained among male teachers.

Testing the means for significance (Female Teachers = 218
(Teacher attitude in school) vs
SECTION II Male Teachers) = 82
Total = 300

| C I | F _f | F _m | |
|----------------|----------------|----------------|---|
| -14 - -11 | 2 | - | Mean $X_f = 15.81$ |
| -10 - - 7 | 3 | 9 | Mean $X_m = 10.18$ |
| - 6 - - 3 | 1 | 9 | F = 11.72 |
| - 2 - + 1 | 8 | 7 | M = 11.18 |
| 2 - 5 | 11 | 7 | Standard Error |
| 6 - 9 | 25 | 11 | $S.E. = \sqrt{\frac{\sigma_f^2}{n_1} + \frac{\sigma_m^2}{n_2}}$ |
| 10 - 13 | 33 | 8 | |
| 14 - 17 | 30 | 7 | |
| 18 - 21 | 37 | 11 | |
| 22 - 25 | 42 | 6 | Whereby |
| 26 - 29 | 17 | 5 | $n_1 = \text{no. of Females}$ |
| 30 - abo ve | 9 | 2 | $n_2 = \text{no. of Females}$ |
| | <u>218</u> | <u>82</u> | $S.E. = \sqrt{\frac{11.72^2}{218} + \frac{11.18^2}{82}}$ |

$$= \sqrt{.63 + 1.53}$$

$$= \sqrt{2.16}$$

$$= 1.47$$

$$X_f - X_m$$

$$\text{Difference:} = 15.81 - 10.18$$

$$= 5.63$$

$$\frac{\text{Difference}}{S.E.} = \frac{5.63}{1.47} = 3.83$$

The difference between means is greater than 1.96 S.E. at 5% level of significance and cannot be attributed to chance factor

C I = Class Interval

F_f = Frequency obtained among female teachers.

F_m = Frequency obtained among male teachers.

Appendix A-VII

Testing the means for significance
(Attitudes towards adult sex roles)

(Government Schools = 150
vs
Non-government Schools = 150
Total = 300)

SECTION I

| C.I. | F _G | F _{NG} | |
|-----------|----------------|-----------------|--|
| -28 - -24 | 2 | - | X _{NG} = 25.65 |
| -23 - -19 | 2 | - | X _G = 13.29 |
| -18 - -14 | 3 | 4 | σ _{NG} = 16.8 |
| -13 - -9 | 4 | 2 | σ _G = 16.3 |
| -8 - -4 | 9 | 3 | |
| -3 - +1 | 13 | 5 | S.E. = $\sqrt{\frac{\sigma_{NG}^2}{n_1} + \frac{\sigma_G^2}{n_2}}$ |
| 2 - 6 | 21 | 9 | |
| 7 - 11 | 13 | 11 | Whereby |
| 12 - 16 | 20 | 7 | n ₁ = no. of teachers in Non-Govt. Schools |
| 17 - 21 | 18 | 13 | n ₂ = no. of teachers in Govt. Schools |
| 22 - 26 | 12 | 12 | |
| 27 - 31 | 12 | 23 | |
| 32 - 36 | 9 | 20 | $= \sqrt{\frac{16.8^2}{150} + \frac{16.3^2}{150}}$ |
| 37 - 41 | 7 | 10 | $= \sqrt{1.88 + 1.77}$ |
| 42 - 46 | 4 | 16 | $= \sqrt{3.65}$ |
| 47 - 51 | - | 9 | $= 1.9.$ |
| 52 - 56 | 1 | 5 | |
| 57 - 61 | 0 | 1 | Difference = Y _{NG} - X _G |
| | <u>150</u> | <u>150</u> | $= 25.65 - 13.29$ |
| | | | $= 12.36$ |

$$\frac{\text{Difference}}{\text{S.E.}} = \frac{12.36}{1.9} = 6.5$$

The difference between means is greater than 1.96 S.E. at 5% level of significance hence cannot be attributable to chance factor.

C I = Class Interval F_G = Frequency obtained in Govt. Schools
F_{NG} = Frequency obtained in non-Govt. schools

Appendix A-VIII

Testing the means for significance (Government Schools = 150
(Teacher behaviour in school) vs
Non-government Schools) = 150
Total = 300

SECTION II

| C I | F _G | F _{NG} | |
|------------|----------------|-----------------|---|
| -14 - -11 | 1 | 1 | Mean X _G = 10.087 |
| -10 - - 7 | 9 | 2 | Mean X _{NG} = 17.693 |
| - 6 - - 3 | 7 | 3 | σ _G = 9.4 |
| - 2 - + 1 | 12 | 2 | σ _{NG} = 8.7 |
| 2 - 5 | 12 | 4 | Standard Error |
| 6 - 9 | 29 | 11 | $S.E. = \sqrt{\frac{\sigma_G^2}{n_1} + \frac{\sigma_{NG}^2}{n_2}}$ |
| 10 - 13 | 25 | 17 | |
| 14 - 17 | 16 | 22 | Whereby |
| 18 - 21 | 20 | 27 | n ₁ = no. of Govt. teachers |
| 22 - 25 | 12 | 34 | n ₂ = no. of Govt. teachers |
| 26 - 29 | 7 | 16 | $= \sqrt{\frac{9.4^2}{150} + \frac{8.7^2}{150}}$ $= \sqrt{.589 + .505}$ $= \sqrt{1.094}$ $= 1.04$ |
| 30 & above | 0 | 11 | |
| | <u>150</u> | <u>150</u> | |

$$\begin{aligned} \text{Difference} &= X_{NG} - X_G \\ &= 17.693 - 10.087 \\ &= 7.606 \end{aligned}$$

$$\frac{\text{Difference}}{S.E.} = \frac{7.606}{1.04} = 7.31$$

The difference between means is greater than 1.96 S.E. at 5% level of significance and it cannot be attributed to chance

C I = Class Interval

F_G = Frequency obtained in Govt. Schools

F_{NG} = Frequency obtained in Non-govt. Schools

Appendix A-IX

Testing the means for significance (Co-educational Schools =100
(Attitude towards adult sex roles)

SECTION I

vs
Non-Co-educational
Schools =200
Total =300

| C.I. | F _C | F _{NC} | |
|-----------|----------------|-----------------|---|
| -28 - -24 | 0 | 2 | Mean i.e. $\bar{X}_C = 20.7$ |
| -23 - -19 | 0 | 2 | |
| -18 - -14 | 0 | 7 | Mean i.e. $\bar{X}_{NC} = 18.9$ |
| -13 - -9 | 3 | 3 | Standard Error |
| -8 - -4 | 5 | 7 | |
| -3 - +1 | 5 | 13 | S.E. = $\sqrt{\frac{\sum C^2}{n_1} + \frac{\sum NC^2}{n_2}}$ |
| 2 - 6 | 9 | 21 | = $\sqrt{\frac{16.89^2}{100} + \frac{17.93}{200}}$ |
| 7 - 11 | 11 | 13 | = $\sqrt{2.85 + 1.607}$ |
| 12 - 16 | 13 | 14 | = $\sqrt{4.457}$ |
| 17 - 21 | 11 | 20 | = 2.11 |
| 22 - 26 | 3 | 21 | |
| 27 - 31 | 8 | 27 | Difference $\bar{X}_C - \bar{X}_{NC} = 20.7 - 18.9 = 1.8$ |
| 32 - 36 | 9 | 19 | |
| 37 - 41 | 8 | 11 | $\frac{\text{Difference}}{\text{S.E.}} = \frac{1.8}{2.11} = .853$ |
| 42 - 46 | 9 | 11 | |
| 47 - 51 | 2 | 6 | |
| 52 - 56 | 4 | 2 | |
| 57 - 61 | 0 | 1 | |
| | <u>100</u> | <u>200</u> | |

Since the difference between means is less than 1.96 S.E.
at 5% level of significance, it can be attributed to
fluctuations of sampling.

C I = Class Interval

F_C = Frequency obtained in Co-educational Schools

F_{NC} = Frequency obtained in Non-Co-educational Schools

Appendix A-X

Testing the means for significance (Co-educational
(Teacher attitude in school) Schools

vs

SECTION II

Unisex schools = 20

Total = 30

| C I | F _C | F _{NC} | |
|------------|----------------|-----------------|--|
| -14 - -11 | 2 | - | Mean X_C = 14.62 |
| -10 - - 7 | 2 | 9 | Mean X_{NC} = 13.26 |
| - 6 - - 3 | 3 | 7 | \bar{X}_C = 10.02 |
| - 2 - + 1 | 6 | 8 | \bar{X}_{NC} = 9.49 |
| 2 - 5 | 3 | 13 | Standard Error |
| 6 - 9 | 14 | 26 | S.E. = $\sqrt{\frac{\sigma_C^2}{n_1} + \frac{\sigma_{NC}^2}{n_2}}$ |
| 10 - 13 | 8 | 34 | |
| 14 - 17 | 16 | 21 | Whereby |
| 18 - 21 | 13 | 35 | n_1 = teachers in Co-ed |
| 22 - 25 | 19 | 29 | n_2 = teachers of non-Co-ed |
| 26 - 29 | 9 | 12 | |
| 30 & above | 5 | 6 | |
| | <u>100</u> | <u>200</u> | |

$$\begin{aligned}
 &= \sqrt{\frac{10.02^2}{100} + \frac{9.49^2}{200}} \\
 &= \sqrt{1.004 + .45} \\
 &= \sqrt{1.454} \\
 &= 1.21
 \end{aligned}$$

$$\text{Difference} = X_C - X_{nc}$$

$$14.62 - 13.26 = 1.36$$

$$\frac{\text{Difference}}{\text{S.E.}} = \frac{1.36}{1.21} = 1.124$$

The difference between means is less than 1.96 S.E. at 5% level of significance and can be attributable to chance.

C I = Class Interval

F_C = Frequency obtained in Co-educational Schools

F_{nc} = Frequency obtained in non Co-educational Schools

Appendix A-XI

Hindus = 254
Christians = 42
Total = 296*

Testing the means for significance

SECTION I

(Attitude towards adult sex roles)

$$\begin{aligned}X_H &= 18.31 \\X_C &= 26.29 \\s_H &= 17.32 \\s_C &= 14.05\end{aligned}$$

Standard Error

$$S.E. = \sqrt{\frac{s_H^2}{n_1} + \frac{s_C^2}{n_2}}$$

Whereby

$$\begin{aligned}n_1 &= \text{no. of Hindus} \\n_2 &= \text{no. of Christians}\end{aligned}$$

$$\begin{aligned}&= \sqrt{\frac{17.32^2}{254} + \frac{14.05^2}{42}} \\&= \sqrt{1.18 + 4.7} \\&= \sqrt{5.88}\end{aligned}$$

$$S.E. = 2.4$$

$$\text{Difference} = X_C - X_H = 26.29 - 18.31 = 7.98$$

$$\frac{\text{Difference}}{S.E.} = \frac{7.98}{2.4} = 3.33$$

The difference is more than 1.96 S.E. at 5% level of significance, and cannot be attributed to fluctuations of sampling.

* 4 Muslim teachers deleted in analysis.

Appendix A-XII

Hindus = 254
Christians = 42
Total = 296*

Testing the means for significance

SECTION II

(Teacher attitude in School)

$$\bar{X}_H = 12.89$$

$$\bar{X}_C = 17.69$$

$$s_H = 10.4$$

$$s_C = 6.29$$

Standard Error

$$S.E. = \sqrt{\frac{s_H^2}{n_1} + \frac{s_C^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of Hindus}$$

$$n_2 = \text{no. of Christians}$$

$$= \sqrt{\frac{10.4^2}{254} + \frac{6.29^2}{42}}$$

$$= \sqrt{.426 + .942}$$

$$= \sqrt{1.368}$$

$$= 1.17$$

$$\text{Difference} = \bar{X}_C - \bar{X}_H = 17.69 - 12.89 = 4.8$$

$$\frac{\text{Difference}}{S.E.} = \frac{4.8}{1.17} = 4.1$$

The difference is greater than 1.96 S.E. and cannot be attributed to fluctuations of random sampling.

* 4 Muslim teachers deleted in analysis.

Appendix A-XIII(a)

Age group A = 111

Age group B = 120

Testing the means for significance
Age group 23 - 33 (A) and Age group 34 - 44 (B)

SECTION I

(Attitude towards adult sex roles)

$$\bar{X}_A = 22.73$$

$$\bar{X}_B = 18.06$$

$$s_A = 17.25$$

$$s_B = 16.29$$

Standard Error

$$S.E. = \sqrt{\frac{s_A^2}{n_1} + \frac{s_B^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of teachers in age group 23 - 33}$$

$$n_2 = \text{no. of teachers in age group 34 - 44}$$

$$= \sqrt{\frac{17.25^2}{111} + \frac{16.29^2}{120}}$$

$$= \sqrt{2.681 + 2.211}$$

$$= \sqrt{4.892}$$

$$S.E. = 2.21$$

$$\text{Difference} = \bar{X}_A - \bar{X}_B = 22.73 - 18.06 = 4.67$$

$$\frac{\text{Difference}}{S.E.} = \frac{4.67}{2.21} = 2.113$$

The difference is more than 1.96 S.E. at 5% level of significance and cannot be attributed to fluctuations of sampling.

Testing the means for significance

Age group 23 - 33 (A) and Age group 45 and above (C)

SECTION I

(Attitude towards adult sex roles)

Age Group A = 111

Age group C = 69

$$X_A = 22.73$$

$$X_C = 16.93$$

$$X_A = 17.25$$

$$X_C = 17.93$$

Standard Error

$$S.E. = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of teachers in age group 23 - 33}$$

$$n_2 = \text{no. of teachers in age group 45 and above}$$

$$= \sqrt{\frac{17.25^2}{111} + \frac{17.93^2}{69}}$$

$$= \sqrt{2.681 + 4.659}$$

$$= \sqrt{7.34}$$

$$= 2.7$$

$$\text{Difference} = X_A - X_C = 22.73 - 16.93 = 5.8$$

$$\frac{\text{Difference}}{S.E.} = \frac{5.8}{2.7} = 2.148$$

The difference is more than 1.96 S.E. at 5% level of significance and cannot be attributed to fluctuations of sampling.

Appendix A-XIII(c)

Age group B = 120

Age group C = 69

Testing the means for significance

Age group 34-44 (B) and Age group 45 and above (C)

SECTION I

(Attitude towards adult sex roles)

$$X_B = 18.06$$

$$X_C = 16.93$$

$$B = 16.29$$

$$C = 17.93$$

Standard Error

$$S.E. = \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of teachers in age group 34 - 44}$$

$$n_2 = \text{no. of teachers in age group 45 and above}$$

$$= \sqrt{\frac{16.29^2}{111} + \frac{17.93^2}{69}}$$

$$= \sqrt{2.11 + 4.659}$$

$$= \sqrt{6.679}$$

$$= 2.58$$

$$\text{Difference} = X_B - X_C = 18.06 - 16.93 = 1.13$$

$$\frac{\text{Difference}}{S.E.} = \frac{1.13}{2.58} = .438$$

The difference is less than 1.96 S.E. at 5% level of significance and it can be attributed to fluctuations of sampling.

Age group A = 111

Age group B = 120

Testing the means for significance

Age group 23-33 (A) and Age group 34-44 (B)

SECTION II

(Teacher attitude in school)

$$\bar{X}_A = 16.03$$

$$\bar{X}_B = 12.7$$

$$s_A = 10.88$$

$$s_B = 9.37$$

Standard Error

$$S.E. = \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of teachers in age group 23 - 33}$$

$$n_2 = \text{no. of teachers in age group 34 - 44}$$

$$= \sqrt{\frac{10.8^2}{111} + \frac{9.37^2}{120}}$$

$$= \sqrt{1.051 + .732}$$

$$= \sqrt{1.783}$$

$$= 1.33$$

$$\text{Difference} = \bar{X}_A - \bar{X}_B = 16.03 - 12.7 = 3.33$$

$$\frac{\text{Difference}}{S.E.} = \frac{3.33}{1.33} = 2.5$$

The difference is greater than 1.96 S.E. at 5% level of significance and cannot be attributed to fluctuations of sampling.

Appendix A-XIV (b)

Age group A = 111

Age group C = 69

Testing the means for significance

Age group 23-33 (A) and 45 and above (C)

SECTION II

(Teacher attitude in school)

$$\bar{X}_A = 16.03$$

$$\bar{X}_C = 12.42$$

$$s^2_A = 10.8$$

$$s^2_C = 10.06$$

Standard Error

$$S.E. = \sqrt{\frac{s^2_1}{n_1} + \frac{s^2_2}{n_2}}$$

Whereby

$$n_1 = \text{no. of teachers in age group 23 - 33}$$

$$n_2 = \text{no. of teachers in age group 45 & above}$$

$$= \sqrt{\frac{10.8^2}{111} + \frac{10.06^2}{69}}$$

$$= \sqrt{1.05 + 1.466}$$

$$= \sqrt{2.516}$$

$$= 1.6$$

$$\text{Difference} = \bar{X}_A - \bar{X}_C = 16.03 - 12.42 = 3.61$$

$$\frac{\text{Difference}}{S.E.} = \frac{3.61}{1.6} = 2.26$$

Difference is greater than 1.96 S.E. at 5% level of significance and cannot be attributed to fluctuations of sampling.

Appendix A-XIV (C)

Age group B = 120

Age group C = 69

Testing the means for significance
Age group 34-44 (B) and Age group (c) 45 and above

SECTION II

(Teacher attitude in school)

$$\begin{aligned} \bar{X}_B &= 12.7 \\ \bar{X}_C &= 12.42 \\ S_B &= 9.37 \\ S_C &= 10.06 \end{aligned}$$

Standard Error

$$S.E. = \sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}$$

Whereby

n_1 = no. of teachers in age group 34 - 44

n_2 = no. of teachers in age group 45 & above

$$\begin{aligned} &= \sqrt{\frac{9.37^2}{120} + \frac{10.06^2}{69}} \\ &= \sqrt{0.732 + 1.466} \\ &= \sqrt{2.198} \\ &= 1.48 \end{aligned}$$

$$\text{Difference} = \bar{X}_B - \bar{X}_C = 12.7 - 12.42 = .28$$

$$\frac{\text{Difference}}{S.E.} = \frac{.28}{1.48} = .189$$

The difference is less than 1.96 S.E. at 5% level of significance and can be attributable to fluctuations of sampling.

Appendix A-KV(a)

Males = 82
Females = 218
Total = 300

Testing the significance of means between
male and female teachers

Role of Woman as person

$$\bar{X}_F = 13.54$$

$$\bar{X}_M = 7.00$$

$$\bar{F} = 7.74$$

$$\bar{M} = 8.76$$

Standard Error

$$S.E. = \sqrt{\frac{\bar{F}^2}{n_1} + \frac{\bar{M}^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of females}$$

$$n_2 = \text{no. of males}$$

$$= \sqrt{\frac{7.74^2}{218} + \frac{8.76^2}{82}}$$
$$= \sqrt{.275 + .936}$$
$$= \sqrt{1.211}$$

$$S.E. = 1.1$$

$$\text{Difference} = \bar{X}_F - \bar{X}_M = 13.54 - 7.0 = 6.54$$

$$\frac{\text{Difference}}{S.E.} = \frac{6.54}{1.1} = 5.95$$

The difference is more than 1.96 S.E. at 5% level and cannot be attributed to fluctuations of sampling.

Appendix A-XV(b)

Males = 82

Females = 218

Total = 300

Testing the significance of means between
male and female teachers
Women as housewife/mother

$$X_F = 2.84$$

$$X_H = -.67$$

$$S_F = 6.54$$

$$S_H = 7.32$$

Standard Error

$$S.E. = \sqrt{\frac{S_F^2}{n_2} + \frac{S_H^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of females}$$

$$n_2 = \text{no. of males}$$

$$= \sqrt{\frac{6.54^2}{218} + \frac{7.32^2}{82}}$$

$$= \sqrt{.196 + .653}$$

$$= \sqrt{.849}$$

$$S.E. = .92$$

$$\text{Difference} = X_F - X_H = 2.84 - (-.67) = 3.51$$

$$\frac{\text{Difference}}{S.E.} = \frac{3.51}{.92} = 3.81$$

The difference is greater than 1.96 S.E. at 5% level of significance and cannot be attributed to fluctuations of sampling.

Appendix A-XV(c)

Males = 82

Females = 218

Total = 300

Testing the significance of means between
male and female teachers
Women as Worker

$$X_F = 7.19$$

$$X_H = 2.04$$

$$\sigma_F = 5.28$$

$$\sigma_H = 5.34$$

Standard Error

$$S.E. = \sqrt{\frac{\sigma_F^2}{n_1} + \frac{\sigma_H^2}{n_2}}$$

Whereby

$$n_1 = \text{no. of females}$$

$$n_2 = \text{no. of males}$$

$$= \sqrt{\frac{5.28^2}{218} + \frac{5.34^2}{82}}$$

$$= \sqrt{.128 + .348}$$

$$= \sqrt{.476}$$

$$S.E. = .69$$

$$\text{Difference} = X_F - X_H = 7.19 - 2.04 = 5.15$$

$$\frac{\text{Difference}}{S.E.} = \frac{5.15}{.69} = 7.45$$

The difference is greater than 1.96 S.E. at 5% level of significance and cannot be attributed to fluctuations of sampling.

Appendix A - Male Biases

Statements on which scores reveal strong biases of male respondents

(a) Women as Housewife

- Q.2 A successful marriage requires greater adjustment on the part of the woman than man - Agreement of 58.54% men.
- Q.5 Men should not sacrifice their professional ambitions in favour of domestic obligation while women should - Agreement of 48.78% men.
- Q.8 Many emotional adjustment problems of children are primarily due to women working outside home - Agreement of 64.63% men.
- Q.11 Possibility of marital disharmony is greater where wives are successful career women - Agreement of 54.38% men.
- Q.17 Even when both the spouses work, it should still be the duty of women to attend to household task and take care of children - Agreement of 48.78% men.
- Q.20 After marriage a man should take decisions on important financial matters leaving the decisions of home task and children to women - Agreement of 47.56 men.
- Q.26 Marriage not career is the ultimate goal of women - Agreement of 45.12% men.

(b) Women as Worker

- Q.6 Career should take precedence over everything else in the life of a women, regardless of their marital status - Disagreement of 41.46% men.
- Q.12 Women handle routine, repetetive tasks better than creative and innovative ones - Agreement of 43.9% men.
- Q.15 Jobs for women should be limited to those which are extension of home tasks such as teaching - Agreement of 56% men.
- Q.30 Dual responsibility of home and work cripple women emotionally and mentally - Disagreement of 63.4% men.

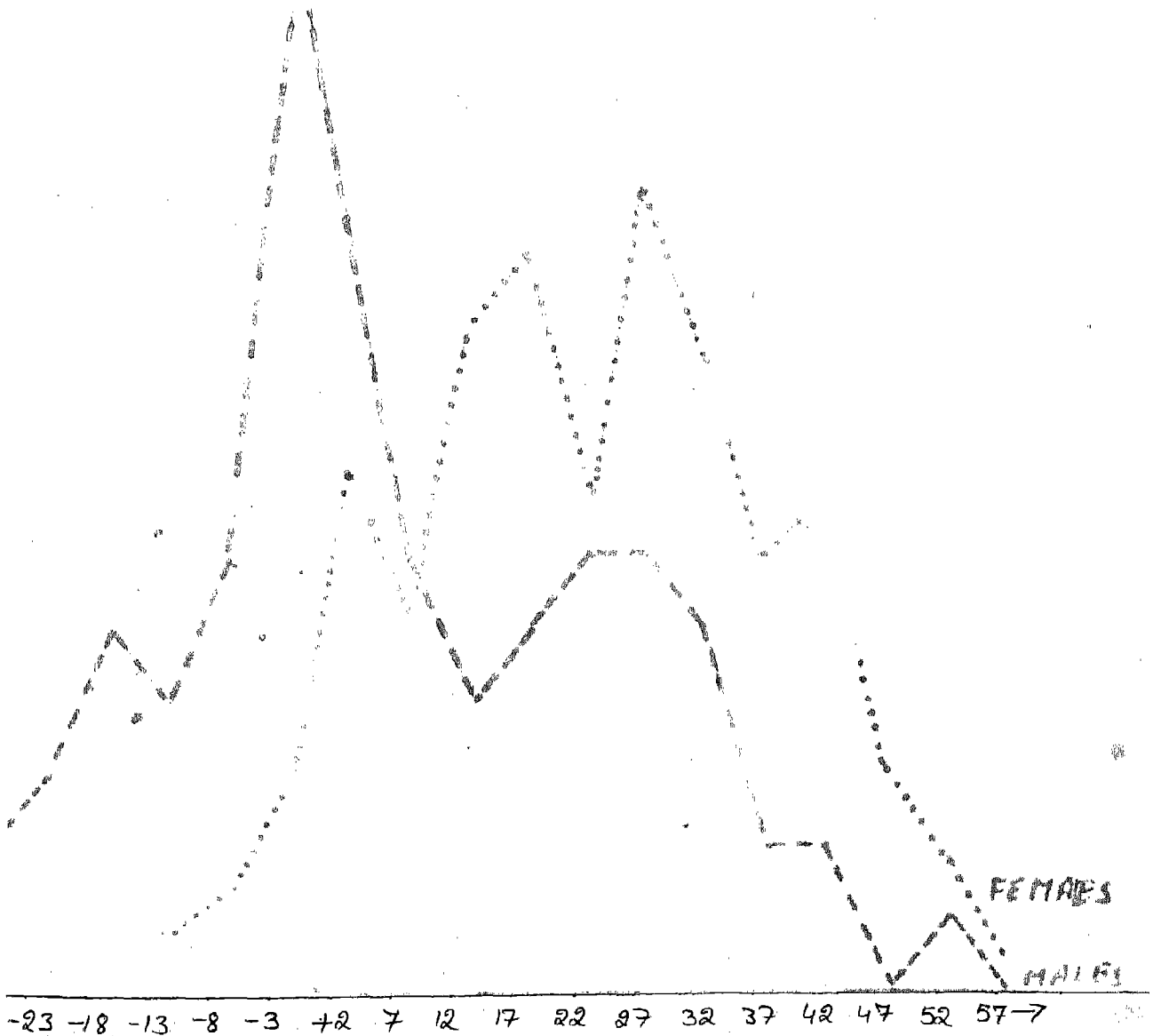
(b) Women as Worker

- Q.6 Career should take precedence over everything else in the life of a women regardless of their marital status - Disagreement of 41.46% men.
- Q.12 Women handle routine, repetetive tasks better than creative and innovative ones - Agreement of 43.9% men.
- Q.15 Jobs for women should be limited to those which are extension of home tasks such as teaching - Agreement of 56% men.
- Q.30 Dual responsibility of home and work cripple women emotionally and mentally - Disagreement of 63.4% men.

APPENDIX B

COMPARISON OF FREQUENCY OF MALES AND
FEMALES FOR SECTION 3 - (HUMPHRIES MOUNTAIN AREA)

MALES - 67
FEMALES - 67

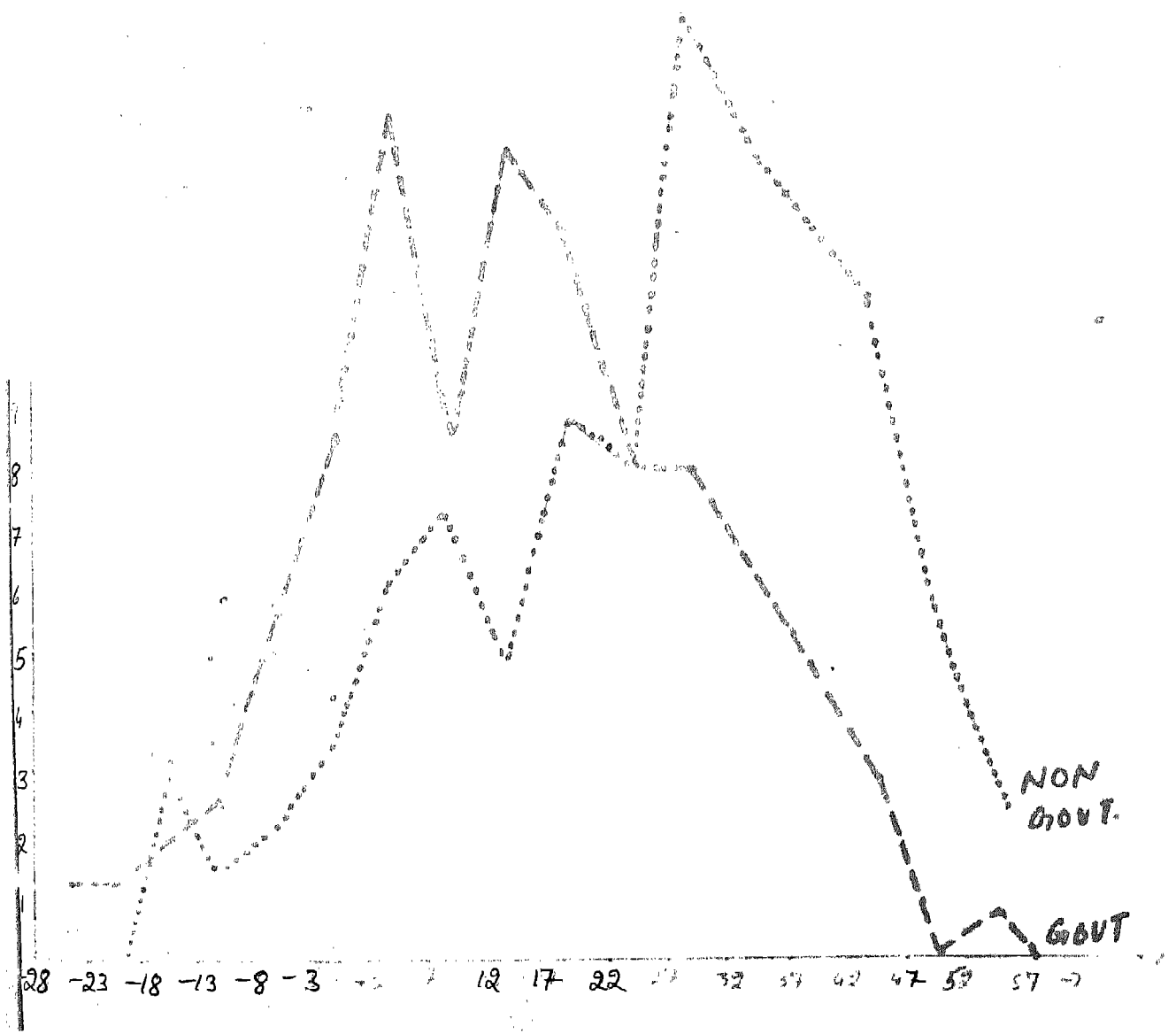


| Age Group | Percentage of Respondents |
|-----------|---------------------------|
| 18-29 | ~65% |
| 30-49 | ~75% |
| 50-69 | ~80% |
| 70+ | ~85% |

| Age Group | Gender | Should take action (%) | Should not take action (%) |
|-----------|--------|------------------------|----------------------------|
| 18-29 | Male | ~85 | ~15 |
| 18-29 | Female | ~88 | ~12 |
| 30-49 | Male | ~82 | ~18 |
| 30-49 | Female | ~85 | ~15 |
| 50-69 | Male | ~78 | ~22 |
| 50-69 | Female | ~80 | ~20 |
| 70+ | Male | ~75 | ~25 |
| 70+ | Female | ~78 | ~22 |

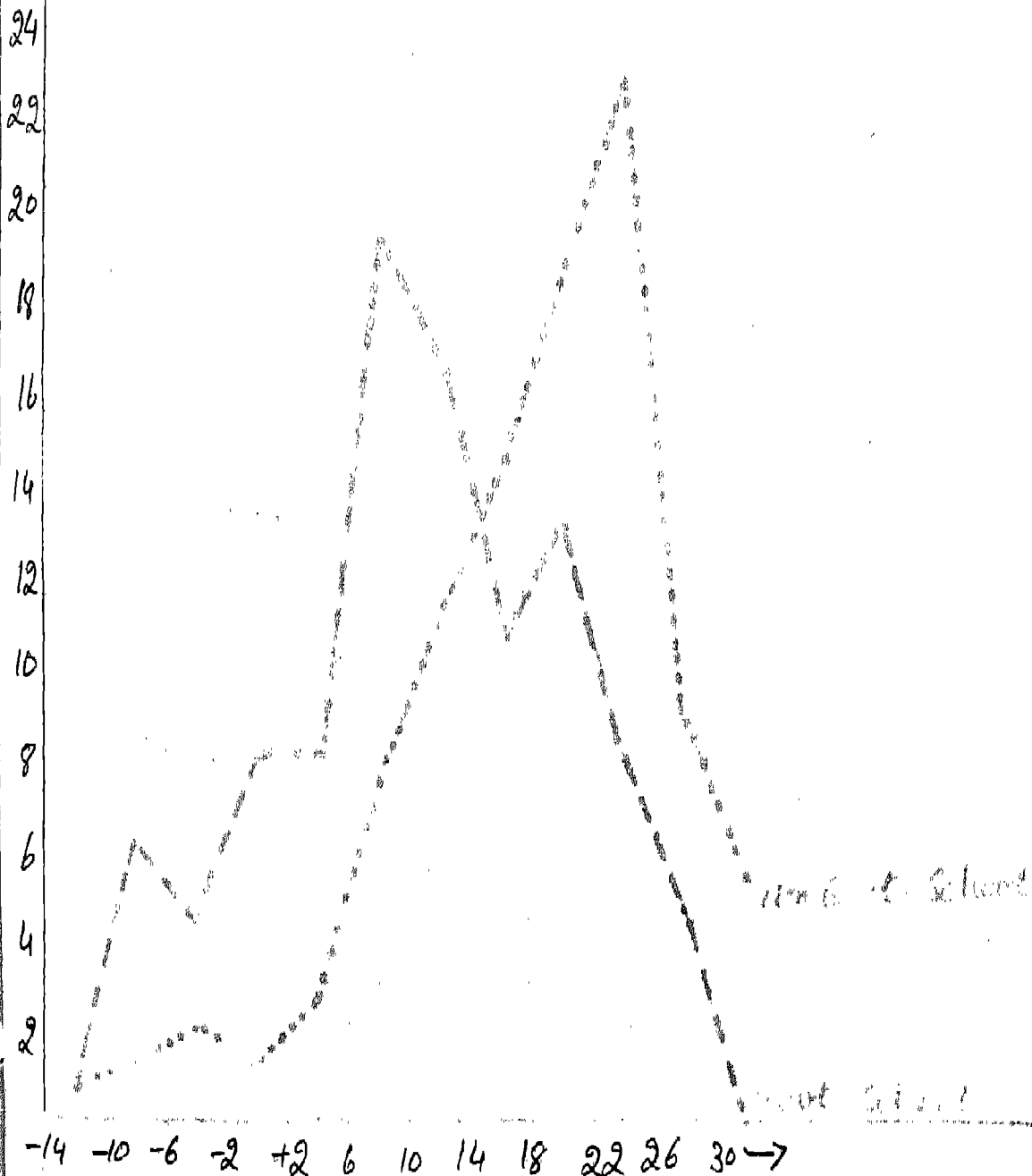
COMPARISON OF THE "GOVT" AND "NON GOVT" GROUPS
 FROM 1928 TO 1957. The "GOVT" group is the group
 of people who were in the government during the period.

GOVT - 1928
 NON GOVT - 1928



COMPARISON OF THE BEHAVIOUR OF GOVT. SCHOOL TEACHERS AND NON GOVT. SCHOOL TEACHERS TOWARDS STUDENTS (TEACHING BEHAVIOUR IN CLASS)

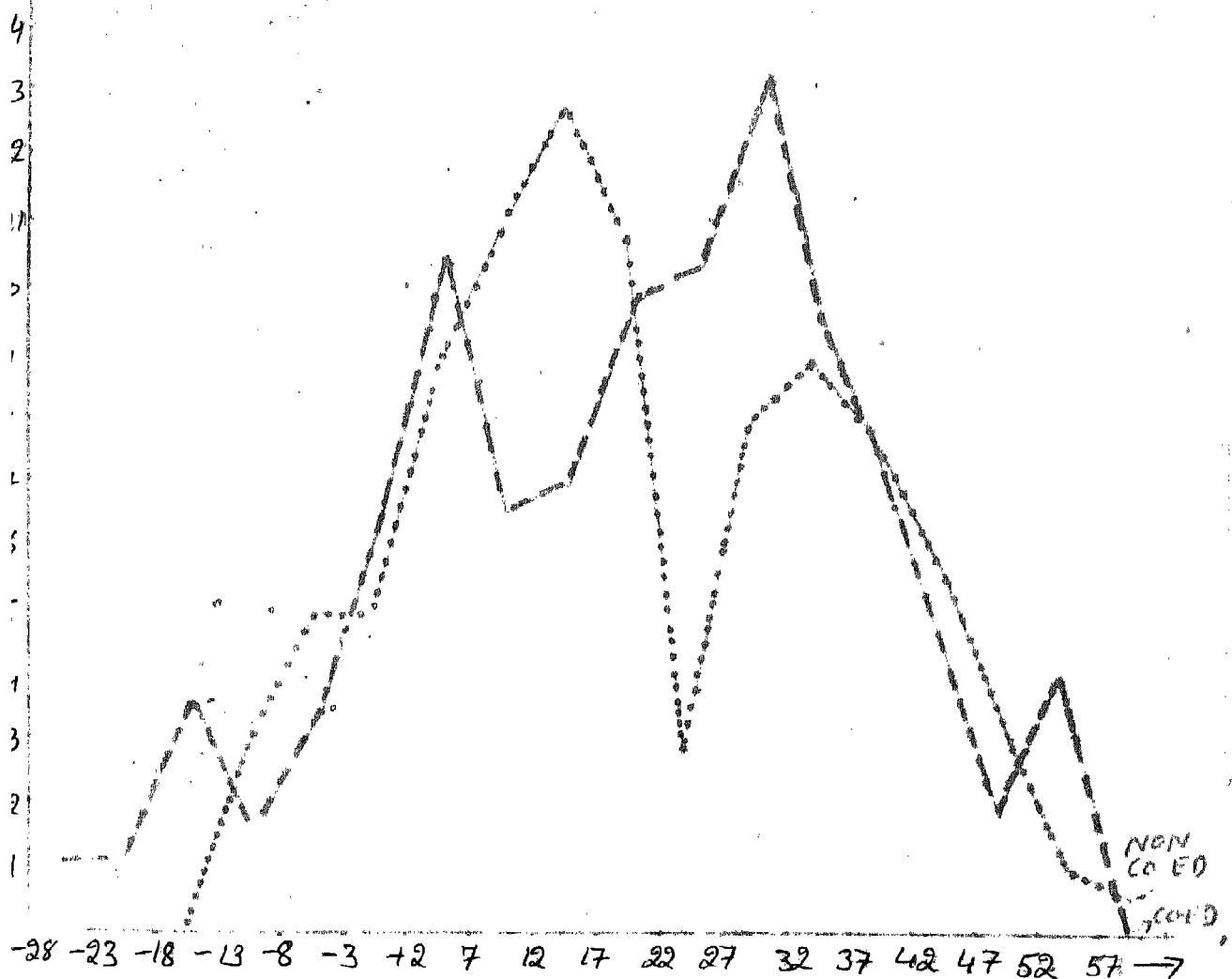
Govt - 000
Non-Govt - 000



COMPARISON OF FREQUENCY OF CO-ED
TEACHERS AND NON CO-ED TEACHERS FOR
SECTION I - (ATTITUDES TOWARDS ADULT SEX RELATIONS)

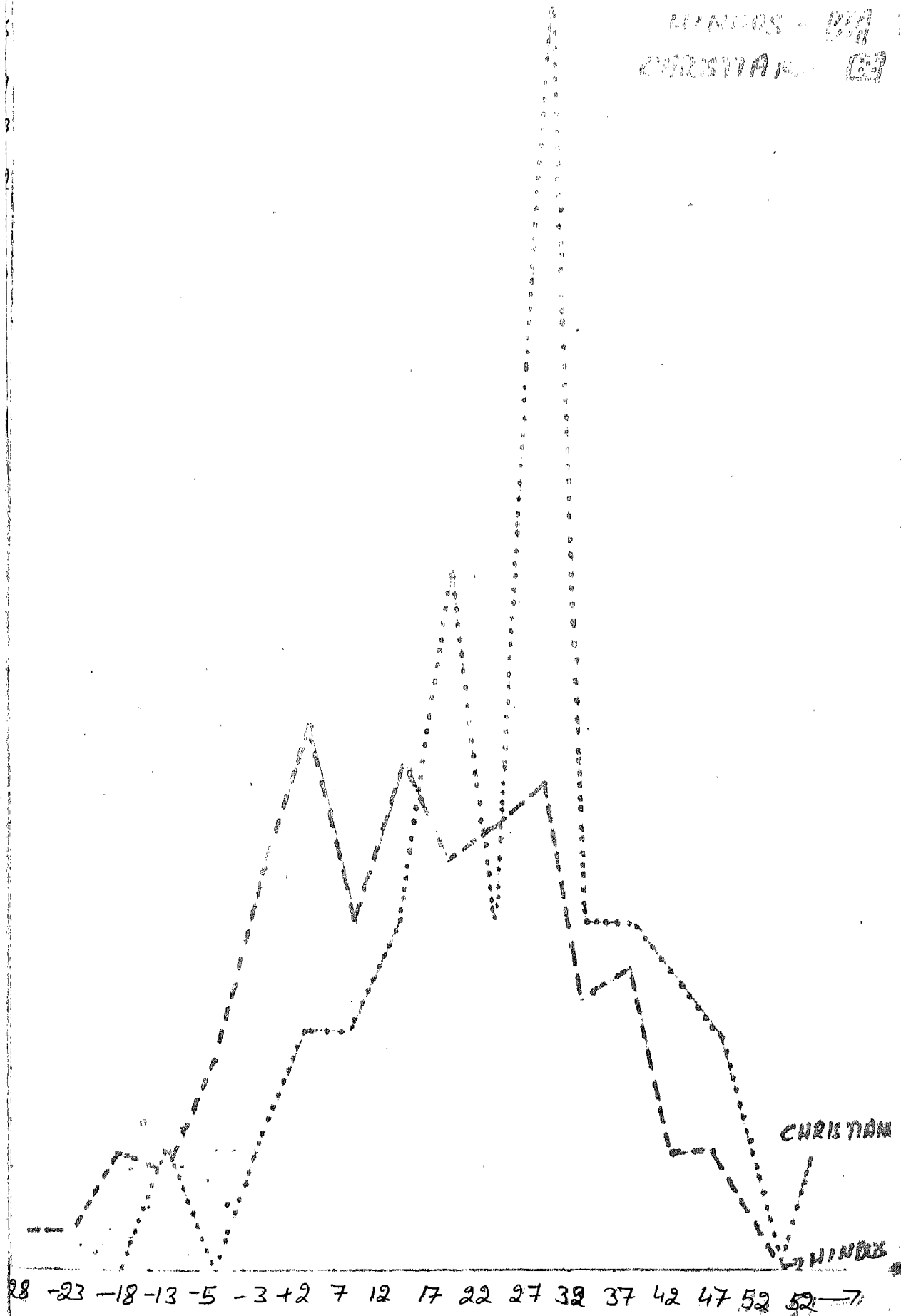
CO-ED - [Symbol]

NON CO-ED - [Symbol]



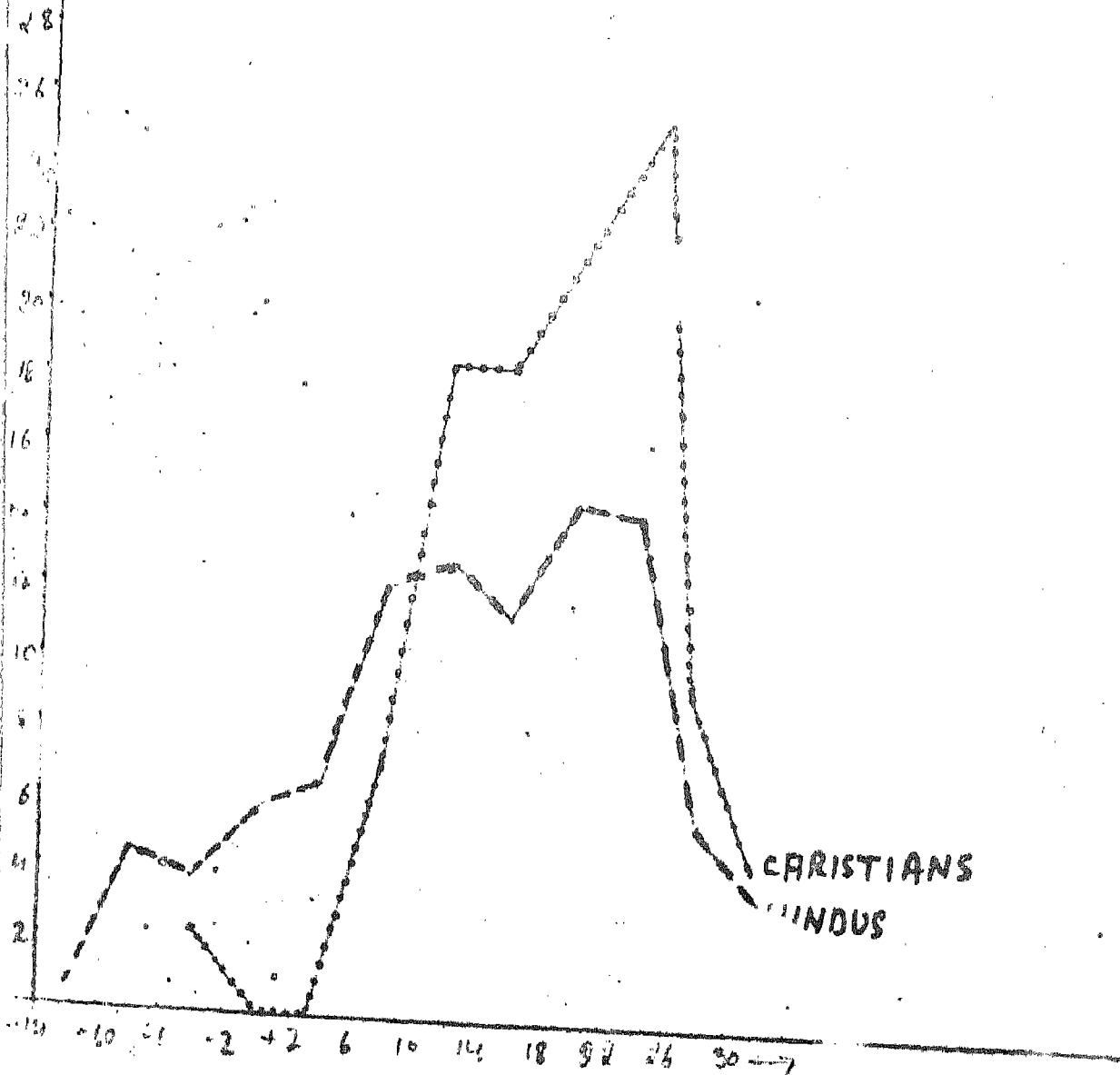
COMPARISON OF FREQUENCY OF HINDUS AND
CHRISTIANS FOR SECTION 2 - LATITUDE 10° 00' N.

HINDUS - [X]
CHRISTIANS - [O]



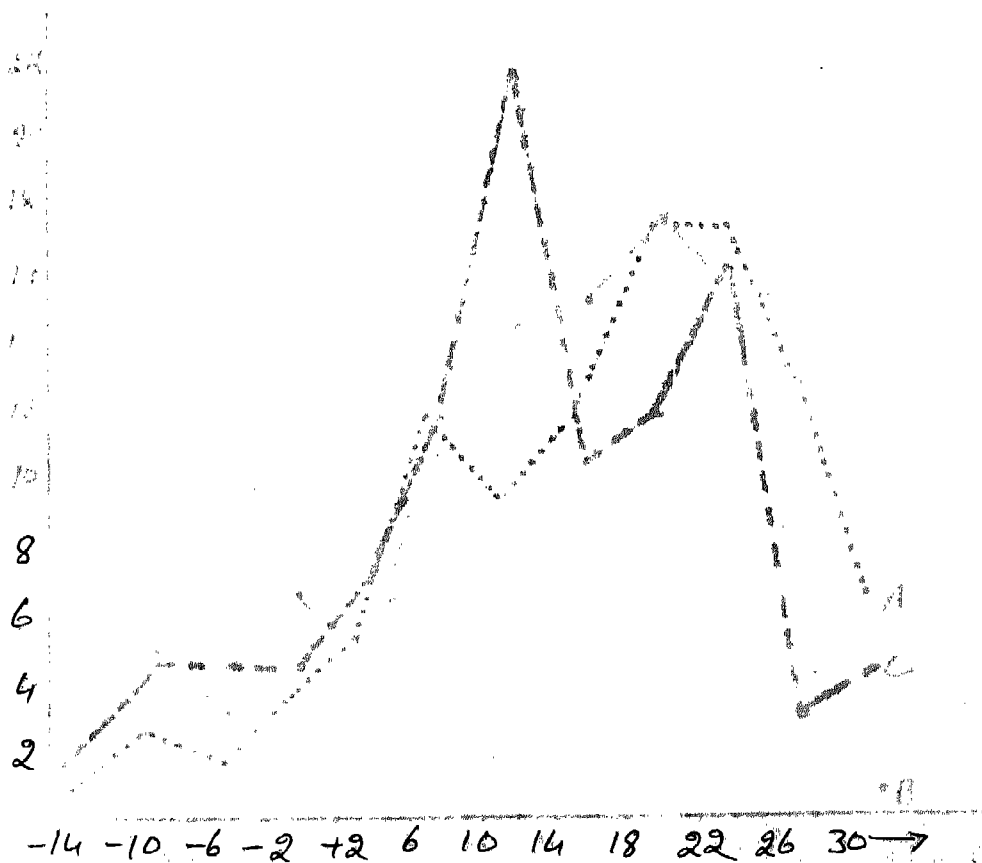
COMPARISON OF FREQUENCY OF HINDUS AND
CHRISTIANS FOR SECTION IV

HINDUS - [diagonal lines]
CHRISTIANS - [dots]



COMPARISON OF FREQUENCY OF DIFFERENT AGE GROUPS FOR SECTION II

| | | |
|-------------------|---|-----|
| Age group - 25-33 | A | 157 |
| " " 34-44 | B | 127 |
| " " 45 & above | C | 157 |



TEACHERS ORIENTATION COURSE
ON SEXISM

(Unpublished Report)

By: NISCHOL K

Sponsored by: The Indian Federation of University Womens'
Association

Financed by : UNICEF

This study was conducted in 1977 with the main objective of orienting teachers with regard to the concept of sexism, thereby creating an awareness among them of any existing sexist^{*11} practises in their school.

Being the first attempt in developing an orientation course, this study further proposed to determine whether the proposed orientation course prompted teachers to change their attitude and methods of classrooms instruction.

If found to be successful in modifying teacher attitudes the proposed orientation course would provide a model programme that could be included in future teacher-training courses.

SAMPLE

The participants in the course were twelve class teachers of the N.D.M.C. Primary school - ten females and two males.

METHODOLOGY

Before beginning the course, the project director, the consultant and an observer observed the teachers in their classrooms to note whether they were transmitting sexist messages to their students in the course of normal classroom conduct.

*11 Discriminatory attitude/behaviour in favour/against
males or females

The teacher group was then exposed to a film slide show (an audio visual tool produced in U.S.A. in English - unadapted to suit Indian conditions). Alongside

- (a) personality rating scale and
- (b) attitudinal questionnaire was given to the group for completion. The pre and post orientation scores obtained on the questionnaire were later compared.

On completion of the Orientation Course, expert observers again recorded their observations in the classrooms of those teachers exposed to the course. Thus an objective evaluation of the orientation course was obtained through a linear comparison of pre and post attitudinal scores and observation of expert observers. Subjective evaluation of the course was done by the participants on a self evaluating form.

The study revealed that:-

1. Prior to the exposure to the Orientation Course, the participants were not aware of the presense of sexist bias in their attitudes. As a consequence of the present exposure, participants become conscious of the imperceptible ways in which they were reflecting gender biases.
2. Teachers felt that they could make positive contribution towards correcting these bias by altering their attitude in the classroom.

Considering that none of the Chi Square tests was found to be significant at 1% level of significance with 2 degrees of freedom, the results obtained were presented on the basis of averages.

FINDINGS

At the outset it was noted that the textbooks revealed sexist bias.

--Male-centered stories outnumbered female-centered stories by 81 to 9.

--Illustrations depicting male figures exclusively outnumbered those depicting females by 263 to 75; there were 98 illustrations of male and female figures together in which the former almost always predominated.

--Biographical references to males outnumbered female references by 78 to 3.

--"Role absence" as far as women were concerned, rather than role stereotyping, was a significant feature of the stories in which women appeared.

--Women were not given names in 50 per cent of the stories in which they were mentioned.

--The impression conveyed by the textbooks was that women were not expected to achieve socially-worthy goals.

Other than the imbalanced images of adult males and females, the portrayal of girls was very negligible. They were depicted as passive and dull individuals. It appeared that they were always reprimanded for mischief while boys who were naughty were admired. Boys and girls were never shown making a combined effort towards a goal.

The family life was also portrayed, with the characters never suffering from misfortune.

On the whole, the images of men/boys and women/girls were unrealistic and inconsistent with national goals.

Influence of Exposure to Educational materials & teacher attitudes on school childrens attitudes towards sex role in society - Kerala

(Financed by Ford Foundation - Delhi)

(Unpublished Report - 1979) NISCHOL K

This study was conducted in Trivandrum and Ottapalam. The sample was drawn from among those teachers, teaching in lower primary schools - aided/administratively controlled by the Government. In the final outcome, the sample comprised of 303 teachers (79 males and 224 females) in Trivandrum while 200 teachers (61 males and 139 females) in Ottapalam.

Objective

The study was concerned with:-

- (a) Text book evaluation and
- (b) Evaluation of total school experience in respect of teacher attitude/behaviour and co-curricular activities in schools.

In the latter case, attention was focussed primarily on societys' sexually-stereotyped assumptions regarding "prevailing" and "acceptable" adult role images and expectations.

Methodology

Following the selection of the sample in both the towns, an attitude questionnaire in Malayalam (self-administered) was given to the groups. This questionnaire was divided into 2 sections. The questionnaire response were indicated on a 5 point scale - each point on the scale being given a numerical score. The numerical

scores on each statement were combined to give a composite score for each section in both towns.

Subsequent to the scoring, percentile norms were calculated separately for both the towns by sex and age of the respondents.

Findings

1. In respect of attitude of teachers (primary) towards adult sex roles in both towns the dispersion of scores was very wide -- indicating that in Trivandrum as well as Ottapalam there were teachers of both sexes who were in favour and against liberalisation of existing constraints on female development. Comparitively speaking Ottapalam teachers revealed greater traditionalism.
2. In both the towns, as against female teachers, the attitude of male teachers reflected greater liberality. Apparently, women had internalised barriers against freedom from the hold of traditional roles.
3. With regard to teacher attitudes towards students in the school setting, both male & female primary school teachers in Trivandrum & Ottapalam showed a tendency towards similar treatment & behaviour towards boy/girl child.

The point to note, however, was that despite the differences in the mean score of male & female teachers, in both the towns of Trivandrum & Ottapallam, the observable differences in their mean scores on their attitude towards adult sex roles were not statistically different -- indicating the

observable differences could be due to sample fluctuation. In Trivandrum, however, the attitudes of male & female teachers in school setting showed statistically significant differences -- male teachers showing greater tendency towards girl students.

4. Analysis of the responses by age in both the towns revealed that there was an inverse relationship between higher age group (i.e. 45 years & above) and liberalisation of female roles. This result was true in respect of teachers attitude towards adult sex roles as well as their attitude towards children in the school setting.

Although this study was micro in nature making it difficult to draw conclusions with confidence, yet the indications were that in Trivandrum & Ottapalam (both having a society matri-lineal in nature) the attitude of male teachers towards adult sex roles were relatively more favourably inclined towards less restrictive roles of women. Possibly, menfolk in such societies have been accustomed to seeing females in positions of authority in work place as well as on the domestic front.

Comparison of results on this study with those done earlier in Delhi/Bombay revealed that attitude of male teachers differed noticeably among primary school teachers in patriarchal societies of Delhi & Bombay as against teachers in matrilineal societies of Trivandrum & Ottapalam. In the latter towns, the male teachers were more in favour of giving opportunity to females to actualise their potential, have freedom to take employment of their choice and to be partners in decision making at home.